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ABSTRACT

Battelle Memorial Institute conducted outcome, net impact, and cost-benefit evaluations of six workforce training programs in Washington State for occupations that do not require a bachelor's degree: postsecondary workforce training at community and technical colleges; adult basic skills education at community and technical colleges; Job Training Partnership Act (JTPA) Title II-C funded services for low income youth; JTPA Title II-A for adults with barriers to employment; JTPA Title III funded services for dislocated workers; and secondary vocational-technical education at high schools and vocational skills centers. Survey populations included 1,650 former training participants, 1,900 employers, and 400 potential training participants who were not enrolled in one of the six programs. Major findings were as follows: (1) over 80% of employers who tried to hire vocationally certified workers had difficulty finding qualified applicants; (2) participants wanted better support services, especially job search assistance; (4) employers were generally satisfied with employees who had completed one of the programs studied; (3) overall results were positive for vocational education in high schools and community/technical colleges and for JTPA Title III; and (4) adult basic education and JTPA Title II results indicate the need for substantial changes. (Survey instruments are appended). (KC)

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WORKFORCE TRAINING RESULTS

An Evaluation of Washington State's Workforce Training System

1997

Second Edition

Washington State
Workforce Training and Education
Coordinating Board

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Preface

"Workforce Training Results" evaluates the outcomes of six of Washington State's largest workforce training programs that prepare individuals for employment that does not require a bachelor degree.

This study evaluates postsecondary workforce training at community and technical colleges; adult basic skills education at community and technical colleges; Job Training Partnership Act (JTPA), Title II-C funded services for low income youth; JTPA, Title II-A for adults with barriers to employment; JTPA, Title III funded services for dislocated workers; and secondary vocational-technical education at high schools and vocational skills centers.

In addition to evaluating the six programs, the study also evaluates employer needs for workforce training and the needs of potential training participants who were not enrolled in one of the six programs.

This study examines the range of services provided and the results of each workforce training program. It focuses on the training systems' progress related to Washington State's goals for workforce development: increasing competencies, employment, earnings, productivity, customer satisfaction, return on investment, and reducing poverty.

The second edition of *Workforce Training Results* contains additional findings not discussed in the original edition. The second edition adds an evaluation of adult basic skills education and student survey results for secondary vocational education. The second edition also includes findings from a net impact and cost-benefit evaluation of each program. Later, the Workforce Training and Education Coordinating Board will use the evaluations to make recommendations for changes in the training system.

These evaluations are called for in ESSB 5184, RCW 28C.18.060 (10), which created the Workforce Training and Education Coordinating Board in 1991; the Board's "High Skills, High Wages: Washington's Comprehensive Plan for Workforce Training and Education"; and in SSB 5992, RCW 28C.18.060 (4) enacted in 1995.

Workforce Training Results

An Evaluation of Washington State's Workforce Training System

1997

Second Edition

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Executive Summary

Introduction

This report presents the major findings from outcome, net impact, and cost-benefit evaluations of Washington State's workforce training system. The evaluations were conducted by Battelle Memorial Institute under contract to the Workforce Training and Education Coordinating Board (WTECB). WTECB prepared this report based upon Battelle's findings.

The evaluation focuses on six of the largest workforce training programs that prepare individuals for employment that does not require a bachelor degree. The six programs are postsecondary workforce training at community and technical colleges,[1] adult basic skills education at community and technical colleges, Job Training Partnership Act (JTPA), Title II-A; JTPA, Title II-C; JTPA, Title III; and secondary vocational-technical education at high schools and vocational skills centers. These programs constitute about two-thirds of state expenditures on workforce development.[2] The largest of the six programs is postsecondary workforce training at community and technical colleges. Approximately six times as many individuals participate in college training as participate in the three JTPA programs combined.

The purpose of the evaluations is to identify the results of the training system. The study concentrates on participant employment, earnings, competencies, participant and employer satisfaction, and return on investment. In addition to evaluating the six programs, the study also evaluates employer needs for workforce training and the needs of potential training participants who were not enrolled in one of the six programs.

For the evaluation, survey responses were obtained from 1,900 Washington employers and from about 1,650 individuals who participated in one of the programs between July 1, 1993, and June 30, 1994.[3] Survey responses were also obtained from nearly 400 potential participants. The surveys were administered during the summer and fall of 1995 except for the surveys of former secondary vocational education and adult basic skills education students. These two surveys were administered during the summer of 1996. The study acquired administrative records on over 100,000 program participants. The study includes employment-related data from the unemployment insurance wage files on the program participants and members of comparison groups with employment reported for unemployment insurance purposes (approximately 85 to 90 percent of in-state employment) and information from college enrollment records on continuing

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[1] Six percent of the participants who completed or otherwise left community or technical college workforce training during 1993-94 were dislocated or other unemployed workers financed through the Employment and Training Trust Fund created under ESHB 1988. The vast majority of participants were funded through tuition and the State General Fund.

[2] "Combining Washington's Workforce Training Funds," Workforce Training and Education Coordinating Board, 1995.

[3] The evaluation is based on data for program participants who completed or otherwise left a program between July 1, 1993, and June 30, 1994. For ease of exposition, the report uses the term "1993–94 program participants" to refer to this group of participants.

education for participants who enrolled at a community or technical college during the 1994–95 school year. The study also includes data from employment service, unemployment insurance, welfare, food stamps, and medical eligibility records for program participants and members of comparison groups.

Unless otherwise indicated, all results reported here have been weighted to reflect the entire population of program participants. Results have also been weighted to reflect the state population of employers with five or more employees.[4]

Readers are cautioned not to make improper comparisons among and between programs since the evaluation methodology differed somewhat from one program to another, and the programs offer different types of services to different populations of participants for different purposes. A technical appendix on research methodology is available upon request.

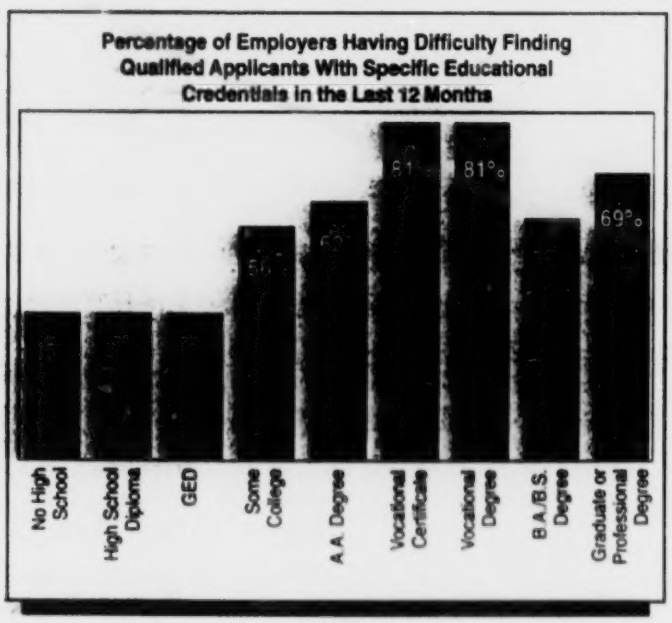

FIGURE 1

Employer Demand for Training

For the study, employers were surveyed about their difficulty in finding qualified job applicants with certain kinds of abilities and job skills. *Fifty-five percent of employers indicated they recently experienced difficulty finding at least one particular skill.*[5] *Most frequently, firms reported difficulty finding new employees with "occupation-specific skills needed to do the job."* Ninety-two percent of the employers who had difficulty finding qualified applicants had difficulty finding applicants with job-specific skills. The next most frequently cited skill deficits were problem solving or critical thinking skills and positive work habits and attitudes (84 and 83 percent, respectively).

More than 80 percent of employers who attempted to hire employees with a vocational certificate or degree over the last year had difficulty finding qualified applicants. This was more than the percentage of employers reporting difficulty finding qualified applicants with any other type of educational credential. In comparison, among employers who attempted to find applicants with other credentials, 69 percent of employers reported

[4] Firms with fewer than five employees are less likely to interact with the state training system and were, therefore, excluded from the survey. The employer survey did not include the federal government.

[5] The report presents exact percentages. However, readers should not mistake the findings as having greater precision than they do. Sampling error for the surveys range up to plus or minus 4 percent.

difficulty finding applicants with a graduate degree, 62 percent had difficulty finding applicants with an academic associate degree, and 58 percent of employers reported difficulty finding qualified applicants with a bachelor degree. Only about one-third of employers reported difficulty finding qualified applicants with a high school diploma. (See Figure 1.)

Small employers are more likely than large employers to have difficulty finding qualified job applicants at almost all educational levels. For example, among small firms (those employing between 5 and 24 employees), 90 percent of employers attempting to hire applicants with a postsecondary vocational degree had difficulty finding qualified applicants. In contrast, among firms employing 100 or more employees, 49 percent of firms that attempted to find applicants with a vocational degree had difficulty.

In addition to their demand for well-trained new employees, employers would like a substantial portion of their current employees to have additional in-school training. Firms were asked "What percent of your current employees in each category listed below would you say need further training in a classroom program (i.e., a program such as taught at a local community college or vocational school) to reach the level of productivity your firm/organization wants?" Employers responded that between 17 and 28 percent of their current employees, depending on their occupations, need classroom training.

These findings on employer demand for postsecondary vocational training, both for new and current employees, are consistent with the results of the Office of Financial Management's 1990 "Investment in Human Capital (IHC) Study." The consistency of these results, five years apart and based on slightly different survey questions, strongly supports the reliability of these findings regarding employers' need for postsecondary workforce training.

- *Employers' difficulty in finding employees with the skills they need is hurting the state's economy.* Among the 55 percent of employers who had difficulty finding qualified applicants during the past year, a large number indicated that the difficulty negatively affected their firm. Between 60 and 70 percent of employers reported that it had lowered their firm's overall productivity, reduced product or service quality, or reduced production output or sales. (See Figure 2.)

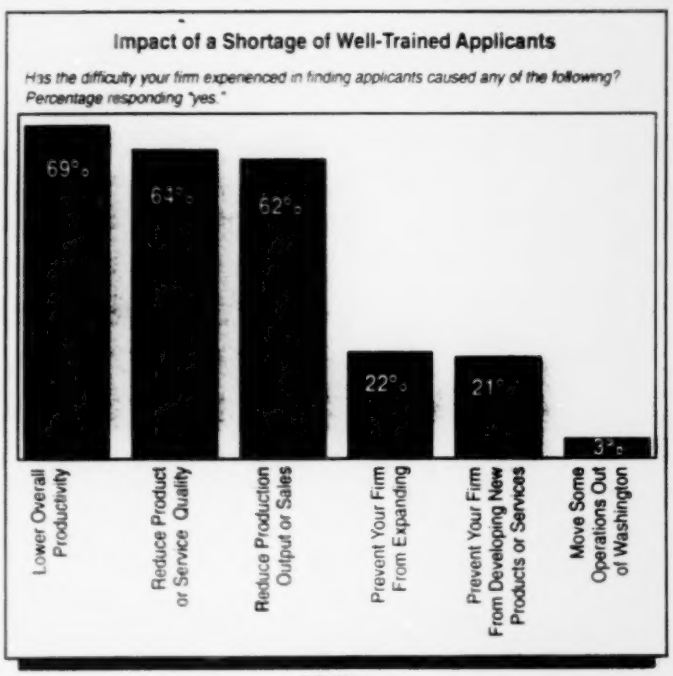
Impact of a Shortage of Well-Trained Applicants
Has the difficulty your firm experienced in finding applicants caused any of the following? Percentage responding "yes."
69%
64%
62%
22%
21%
3%
Lower Overall Productivity
Reduce Product or Service Quality
Reduce Production Output or Sales
Prevent Your Firm From Expanding
Prevent Your Firm From Developing New Products or Services
Move Some Operations Out of Washington

FIGURE 2

Workforce Training Participant and Program Characteristics

The characteristics of individuals who participate in workforce training programs reflect the state population and program eligibility requirements. Workforce training and education at the community and technical colleges and at high schools and vocational skills centers practice "open enrollment," and therefore, tend to reflect the state population for their age cohort.

In contrast, programs under the Job Training Partnership Act (JTPA) reflect the eligibility requirements for participation in the program. *JTPA, Title II participation is limited to low income individuals who have barriers to success in employment or school.* As a result, the participants tend to be poorer, have lower levels of educational attainment, and have higher levels of racial and ethnic minorities than the state population. JTPA, Title III serves only those commonly referred to as "dislocated workers." Therefore, JTPA, Title III participants tend to be white males who have recently lost a good paying job. *These important differences in participant characteristics must be considered when examining differences in program outcomes.*

Another important difference among the programs is the degree to which they emphasize workforce training and education relative to other services. Postsecondary training at community and technical colleges and secondary vocational-technical education, of course, emphasize actual instruction in workforce or basic skills. In contrast, skill training is only one of the services emphasized by JTPA programs. JTPA also emphasizes a variety of employment-related services such as career counseling, referral to needed social services, assistance with resume writing and job interviewing, and job referrals.

Skills Obtained Through Training

Based upon telephone survey responses, most former workforce training participants believe the training they received improved their skills. Among those employed after their training, 53 to 75 percent, depending on the program, said they used the skills that they learned on the job. And among those who used the skills on the job, about 80 percent said the skills were very useful in performing their job duties.

While most participants felt the training they received was effective in improving their skills, there were significant pockets of participants who indicated they did not receive occupational or basic skills instruction. The majority of the JTPA participants for all titles indicated they did not receive basic skills instruction. Forty-one percent of JTPA, Title II-C and 48 percent of Title II-A participants reported they were not trained in occupational-specific skills, and 49 percent of II-A and 59 percent of II-C participants were not trained to use computers.

Many of the participants from all the programs continued to improve their skills and abilities by enrolling in college. About 15 percent of those who left postsecondary workforce training, JTPA, Title II-A for adults, and JTPA, Title II-C for youth during the 1993-94 year, were enrolled in a community or technical college during the following school year. Nearly 50 percent of the 1993-94 secondary vocational-technical completers were enrolled in either a two- or four-year in-state college during the school year following high school graduation. Thirty-seven percent of the vocational-technical completers were enrolled in a community or technical college and 12 percent were enrolled at a four-year college or university.

Employer perception of the competencies of former participants is presented below under employer satisfaction.

Participant Satisfaction

According to the survey responses, former training participants were generally satisfied with their training program. Forty-eight to 70 percent, depending on the program, felt that the program definitely met their objectives and about one-third thought the program partially met their objectives, compared to only 3 to 21 percent who felt that their objectives were not met at all. More reported being very satisfied with the overall quality of their program than reported that they were dissatisfied by a margin of at least three to one. Former participants were particularly satisfied with the quality of the teaching. And most of the former participants were satisfied with the degree to which the training provided them with practical skills that employers want. While most of the training participants were satisfied with the mix of classroom and on-the-job training they had received over the years, a substantial percentage would have preferred more on-the-job or work-based training.

The program areas that appear to be most in need of quality improvement are the support services related to the training, especially assistance with finding a job. Generally, across the programs surveyed, the former participants rated job placement assistance as the support service with which they were least satisfied.

Employer Satisfaction

Employers responded to the survey that they were generally satisfied with the quality of their new employees who had recently completed one of the workforce training programs included in the study. At least 70 percent of the employers were satisfied with the former participants' productivity, and at least 66 percent were satisfied with their job-specific skills. From 59 to 83 percent of the employers, depending on the program, were satisfied with the overall quality of these new workers.

Consistently, employers were least satisfied with three types of skills among their new employees who had recently completed one of the workforce training programs included in the study: computers, math, and problem solving or critical thinking.

Employment and Earnings

The postprogram employment and earnings of former participants are reflective of their economic status prior to entering training. The employment and earnings outcomes for programs that serve a wide range of people or individuals with a history of good earnings tend to be higher than the employment and earnings outcomes for programs that serve only low income individuals. Also, the lower wages for former participants of the two programs that serve only youth—JTPA, Title II-C and secondary vocational-technical education—reflect the lower wages that young, entry-level workers generally receive.

JTPA, Title III participants usually had a good paying job before they became dislocated workers. Among those with reported employment six to nine months after leaving their program, the mean wage was $12.15 per hour, and the mean quarterly earnings were $5,420.[6] When surveyed in the summer or fall of 1995, according to the survey responses, 84 percent of the 1993–94 participants were employed.

[6] Quarterly earnings reflect both hourly wage rates and the number of hours of employment reported for unemployment insurance purposes.

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Former 1993-94 participants of community and technical college workforce training, with reported employment six to nine months after leaving their program, had a mean wage of $10.89 per hour and mean quarterly earnings of $4,421. When surveyed in the summer or fall of 1995, according to the survey responses, 80 percent were employed.

Former 1993–94 participants in adult basic skills education at community or technical colleges, with reported employment six to nine months after leaving their program, had a mean wage of $8.26 per hour and mean quarterly earnings of $3,111. When surveyed in the summer of 1996, according to survey responses, 60 percent were employed.

1993-94 participants of JTPA, Title II-A for adults had a mean wage of $8.00 per hour and mean quarterly earnings of $2,841. When surveyed in the summer or fall of 1995, according to the survey responses, 59 percent were employed.

JTPA, Title II-C for youth ages 16 to 21 serves the lowest income group of the programs included in the study.[7] Among those with reported employment, six to nine months after leaving their program, the mean wage was $6.48 per hour, and the mean quarterly earnings were $1,687. When surveyed in the summer or fall of 1995, according to the survey responses, 60 percent of the 1993-94 JTPA, Title II-C participants were employed.

Secondary vocational-technical education is somewhat different than the other programs in that virtually none of the participants were attempting to support him or herself, let alone a family, before entering the program. Six to nine months after completing a sequence of vocational courses, among those with reported employment, the mean wage was $6.72 per hour, and the mean quarterly earnings were $1,739. When surveyed in the summer of 1996, 77 percent of the 1993–94 vocational completers were employed.

Net Impacts and Return on Investment

The purpose of a net impact analysis is to determine the extent to which the outcomes experienced by program participants were different than outcomes experienced by a comparison group of similar people who did not participate. For example, the net impact analysis shows whether the employment and earnings of participants were better, worse, or no different than the employment and earnings of similar people who did not participate in training. The differences between participant and comparison group outcomes are referred to as "net impacts." *The cost-benefit analysis compares the monetary value of net impacts with program costs. The analysis calculates the value of net impacts only and not the value of gross outcomes.*

According to the net impact and cost-benefit evaluation, postsecondary training at community and technical colleges and secondary vocational-technical education in high schools and skills centers had unequivocally positive net impacts, with participant benefits exceeding public costs. JTPA, Title III, serving dislocated workers, had mostly positive impacts with participant benefits exceeding

[7] Service Delivery Areas for JTPA, Title II-C may choose to serve 14- and 15-year-olds. About five percent of the state's participants are 14- or 15-year-olds.

public costs. While adult basic skills education for students who enrolled for work reasons and JTPA, Title II-A, serving disadvantaged adults, had some positive net impacts for participants, the benefits did not exceed public costs. JTPA, Title II-C, serving disadvantaged youth, had very mixed and, therefore, less clear results.

Participants in college vocational training, compared to similar individuals who did not participate in one of the programs included in the study, experienced strong positive impacts on employment and earnings. Moreover, these impacts grew over time. Three years after training, the impact on the percentage with reported employment was a positive 7.7 percentage points, and quarterly earnings were $1,062 higher. *Based upon a statistical model forecasting benefits to age 65, college participants are expected to gain an average of $102,723 more than members of the comparison group in net earnings and employee benefits; a return of $16 for each taxpayer dollar invested in the program. The return is even greater for individuals who complete a college vocational degree or certificate—$179,481 in personal net earnings and employee benefits; a return of $21 for each public dollar invested in a student completing college training.*

Students completing secondary vocational-technical education from one of the schools included in the study also experienced strong positive net impacts (compared to other young people of similar years of education, most of whom probably completed what is commonly referred to as a "general high school track"). During the third quarter after graduation, completing vocational education was associated with a positive net impact of 4.2 percentage points in reported employment and an increase of $201 in mean quarterly earnings among those with reported employment. In addition, graduating from vocational education was associated with a decrease in the percentage of individuals receiving social welfare benefits. *The findings suggest that completing secondary vocational education may be a useful welfare prevention strategy.* During the first year-and-a-half after graduation, secondary vocational education completers had $3,050 more in average personal earnings and employee benefits than did members of the comparison group. *The positive net impact was higher than the direct taxpayer cost of $1,316 for a student completing two years of vocational education as opposed to another type of high school program.*

Services funded under JTPA, Title III for dislocated workers had a positive net impact on most measures of employment and earnings. The impacts diminished somewhat over time but were still positive three years after the program. Participants had a higher employment rate compared to the comparison group by 8.5 percentage points during the third quarter after the program and by 6.3 percentage points during the 13th quarter. Participants with reported employment had $398 more in quarterly earnings during the third postprogram quarter. There was a small but statistically insignificant difference in earnings during the 13th postprogram quarter. Because the dislocated workers typically had substantial skills and experience, they gave up substantial earnings of $3,408 by investing their time in JTPA rather than immediately accepting available employment. Due to the foregone earnings, the average program cost of $3,064 was greater than the benefits to the typical participant during the first three-and-a-half years after the program. *The forecast to age 65, however, estimates that the average participant will gain $23,233 more in net earnings and employee benefits than will the average member of the comparison group. This is a return of $8 for each taxpayer dollar invested in the program.*

The net impact and cost-benefit evaluation of adult basic skills education at community and technical colleges included only participants who enrolled for a reason related to work. (This is because the evaluation focused on labor market impacts.) *In addition, the study was limited to basic skills students who did not also enroll in vocational training.* This group of students had lower rates of reported employment after the program than did the comparison group—3.7 percentage points lower 3 years after the program. Participants who had reported employment, however, did have higher average quarterly earnings than did the comparison group—$292 higher 3 years after the program. This combination of lower employment and higher earnings for those with employment *resulted in participants gaining $451 more in three-and-a-half years after the program. But the program cost to the taxpayer was an average of $1,261 per participant. Basic skills without vocational training, therefore, was not cost effective for participants who wanted to improve their earnings. Moreover, the forecast to age 65 estimates there will be no further positive net impact on earnings.*

Services funded under JTPA, Title II-A, serving disadvantaged adults, had mixed impacts on the employment and earnings of program participants. The program was associated with no significant difference in employment and earnings in the short-term. Three years after the program, JTPA, Title II-A was associated with an increase of 5.5 percentage points in reported employment, but a decrease of $168 in the average quarterly earnings of those with employment. The average participant gained $1,980 more in net earnings and employee benefits during the first three-and-a-half years after the program than did the average member of the comparison group. This was less than the average program cost of $2,264 to taxpayers. *The forecast estimates that the average participant will gain $3,264 by age 65. While this lifetime gain is greater than the cost of the program, it is not greater than total public costs of $8,168 when additional tax revenues and social welfare payments are taken into account. During both the short-term and the longer-term, the program was associated with large increases in the percentage of individuals receiving social welfare benefits.*

Services funded under JTPA, Title II-C, serving disadvantaged youth, were associated with short-term positive net impacts on employment of 5.0 percentage points and $237 more in quarterly earnings among those with employment, although these impacts diminished over time. The program was also associated with large increases, especially in the short-term in the receipt of social welfare benefits. During the first three-and-a-half years after leaving the program, JTPA, Title II-C participants experienced increased net earnings and employee benefits of $2,760, exceeding the program costs of $2,389 to the public, but not the total public costs of $3,818 when increased tax revenues and social welfare payments are included. *The analysis forecasts that the average participant's net increase in earnings and employee benefits to age 65 will be $19,307, exceeding both the cost of the program and total public costs of $6,274 per participant.*

Individual Demand for Additional Training

The study asked former program participants whether there were any job skills they would like to improve either through their employer or through an educational institution or training program. For most programs, about 70 percent of the former participants indicated they would like additional skill training. The type of skills that they most frequently wanted to improve were computer skills and skills to do a specific job or occupation.

In order to study the demand for training among individuals who did not participate in one of the training programs included in the study during 1993–94, the study selected a group of potential participants from among individuals who had registered with the state's employment service. Most of the selected potential participants had recently lost their jobs and were looking for work, and their level of educational attainment was low compared to the general population. Thirty-two percent of the selected potential participants did not have a high school diploma or GED, and 77 percent had no postsecondary education.

Their survey responses suggest that many of the potential participants could use new job skills in order to find suitable employment. Just under 60 percent said they lacked the skills needed for the jobs that are available. Over 80 percent of the individuals under 25 years of age believed their job search was thwarted because they did not possess the skills needed to qualify for the jobs that were available in their area. Seventy percent of the potential participants, and 79 percent of those under 25 years of age, responded they would like additional training.

The survey responses suggest that a lack of information about community and technical college financial assistance may be a frequent reason why the potential participants did not enroll in a college program. Forty percent of those who had considered enrolling in a two-year college cited cost as a reason for not enrolling. About half of all the potential participants did not know whether they were eligible for financial assistance to attend a community or technical college.

The potential participants were also asked about possible barriers to enrolling in other public training programs such as JTPA or Job Opportunity and Basic Skills (JOBS). The large majority of potential participants, 65 percent, did not know whether they were eligible for other such programs.

Areas for Improvement

Overall, the results are quite positive for vocational education and training at high schools and community and technical colleges. JTPA, Title III, serving dislocated workers, also had generally positive results. The findings for adult basic skills education at community and technical colleges and JTPA, Title II, however, indicate that there should be substantial changes in these programs.

One area that stands out for improvement across programs is job placement assistance. Many participants would like their training programs to provide them with more help in finding a job.

The state could do more to provide individuals with information about career opportunities and about training programs. In particular, the results suggest that more potential participants —such as individuals who are unemployed, low income, and/or lack postsecondary training —could use information about their eligibility for government-supported training programs such as JTPA and about their eligibility for financial assistance to attend a community or technical college.

Many employers would like to see improvements in the computer, math, and problem solving ability of new employees who had recently completed one of the training programs included in the study. This concern is relatively greater regarding new employees who had not completed postsecondary workforce education. Considering all job applicants, not just individuals who had recently completed one of these training programs, employers

would like to see improvement in occupational-specific skills, problem solving ability, and work habits and attitudes.

Employer responses indicate that substantial improvement is needed in the ability of public education and training providers to meet employer needs for training their incumbent workers. Employers are particularly concerned with the ability of public providers (schools, two- and four-year colleges, JTPA programs, and others) to supply the type of training their employees need, and they are also concerned about the cost and convenience of the time and location of the training.

According to the findings, students in adult basic skills education at community and technical colleges who enroll for reasons related to work could benefit from the integration of basic skills instruction with occupational training and workplace experience. **Instruction in the basic skills, particularly math, could be stronger, and students could benefit from improved computer training. Also, students would like improved support services in the areas of career counseling assistance with resume writing and job interviewing, information about other government programs, and financial assistance.**

The results suggest that JTPA, Title II programs that target low income individuals should provide more types of services to more participants, and perhaps, for a longer period of time. However, it must be noted that JTPA programs operate with fewer resources and less time than do secondary or postsecondary workforce training programs.

A substantial percentage of JTPA participants felt they needed more of the following: basic skills instruction; computer training, training in specific occupational skills; career counseling; job placement assistance; and information about other government programs. JTPA, Title II-C for youth, in particular, might do more to provide occupational and especially basic skills instruction. JTPA, Title II career counseling, occupational training, and job placement assistance might do more to target occupations and industries that pay a higher wage.

A substantial percentage of JTPA ,Title III participants reported they needed more assistance with job placement, help in obtaining information about other government programs, financial assistance, and career counseling.

At the beginning of postsecondary training, the colleges could do more to meet student needs for career counseling and advice on course selection. During training, the colleges could target computer training for improvement and provide more opportunities for work-based or on-the-job training. Near the end and after training, the colleges could do more to assist students with finding a job.

Finally, if state policymakers and administrators are interested in using postprogram information to evaluate the effectiveness of K-12 education, substantial improvement is necessary in common school data collection and maintenance. **Based upon a limited sample of districts, schools could do more to improve the computer, problem solving, and basic skills of secondary vocational education completers. Schools also might do more to eradicate gender differences and to connect with work-based learning experiences in higher wage sectors.**

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Introduction

This report presents the major findings from outcome, net impact, and cost-benefit evaluations of Washington State's workforce training system. It also provides some context and interpretation for understanding the significance of the findings for the state's workforce training system. The evaluations were conducted by Battelle Memorial Institute under contract to the Workforce Training and Education Coordinating Board (WTECB). WTECB prepared this report based upon Battelle's findings.

The evaluations focus on education and training for jobs that do not require a bachelor degree. While baccalaureate and graduate education is a very important part of preparing the labor force, WTECB was created to emphasize the skills needed for that part of the labor market that does not require baccalaureate training. As the state Legislature wrote in the Board's authorizing statutes, "We must make certain that our institutions of education place appropriate emphasis on the needs of employers and on the needs of the approximately 80 percent of our young people who enter the world of work without completing a four-year program of higher education."[8]

For this report, the Legislature directed WTECB to "include evaluations of each of the following programs: secondary vocational-technical education; work-related, adult basic skills education; postsecondary workforce training; JTPA, Titles II and III; as well as of the system as a whole."[9] The report analyzes each of these programs and it separates JTPA, Title II into II-A, serving disadvantaged adults, and II-C, serving disadvantaged youth.

The major purpose of the report is to identify the results of the training system. The report discusses the effectiveness of the training system in meeting the needs of employers, program participants, and potential program participants.

Methodology

The outcome evaluation includes findings from the following sources of data:[10]

- Telephone surveys of samples of former 1993–94 program participants for each program, approximately 12 to 24 months after they left training (see the Appendix for a copy of the survey questions);
- A telephone survey of a sample of potential program participants (individuals likely to need training but who were not enrolled in one of the programs included in the study) who had registered with the Washington State Employment Service approximately 12 to 24 months preceding the survey;[11]

[8] Chapter 238, Section 1, Washington Laws of 1991.

[9] RCW 28C.18.090.

[10] The evaluation is based on data for program participants who completed or otherwise left the program between July 1, 1993, and June 30, 1994. For ease of exposition, the report uses the term "1993-94 program participants" to refer to this group of participants.

[11] Individuals who are most likely in need of employment and training assistance were over sampled.

- A mail survey of a sample of employers with five or more employees (see Appendix);
- Computer matches with unemployment insurance wage records for the second quarter of 1992 through the first quarter of 1995 for 1993–94 program participants and potential participants;
- Computer matches with community and technical college enrollment records for 1994–95; and
- Agency participant records for each program.

The participant surveys asked individuals about their training program experiences, their employment and other postprogram experiences, other training they may have received, and demographic background information. About 1,650 former participants completed the telephone survey. The potential participant survey asked individuals about their employment experiences, their training needs, and about possible barriers to meeting those needs. Slightly fewer than 400 potential participants completed the survey. The employer survey asked firms about their employment and training needs, their experiences with training programs and with employees who had gone through the programs, and their firm's in-house training and related practices. Approximately 1,900 employers completed the survey.

The matches with the unemployment insurance wage records provided data on the employment and earnings of former and potential program participants working in employment reported for unemployment insurance purposes (approximately 85 to 90 percent of all employment in the state). The match with two-year college student records provided information on whether former and potential program participants later enrolled in a community or technical college. For all the data matches, great care was taken not to jeopardize individual confidentiality.

Samples for the surveys were selected to represent the population of program participants and employers. Certain categories of participants (such as minorities) and employers (such as relatively small industrial sectors) were over sampled to get sufficient responses to say something meaningful about them. The responses were then weighted to resemble the actual population. Unless otherwise stated, all percentages reported here have been weighted to reflect the entire population of program participants, not just the survey respondents. Results have also been weighted to reflect the state population of employers with five or more employees.

However, for secondary vocational-technical education the study did not attempt to select a random sample. Because the Office of the Superintendent of Public Instruction does not maintain unit records for K–12 students, it was not possible to select a random sample. Instead, it was necessary to solicit school districts to volunteer the necessary data. It should be kept in mind that the sample districts are a broad cross section of school districts in Washington and not a random sample from which general conclusions about the secondary vocational system can be reliably drawn. Therefore, the discussion of secondary vocational-technical education reflects only a large subset of the state program.

The net impact and cost-benefit evaluation collected additional data on program participants and on comparison groups of individuals who did not participate in one of the programs included in the study. The following sources of data, in addition to data collected for the outcome evaluation, were used for the net impact and cost-benefit evaluation:

- Employment Security Department records for Employment Service registrants who serve as potential comparison group members;
- Welfare, food stamps, and Office of Financial Management medical eligibility records for program participants and potential comparison group members provided thorough data matches conducted by the Office of Research and Data Analysis of the Department of Social and Health Services;
- Unemployment insurance wage records for potential comparison group members provided through data matches conducted by the Employment Security Department; and
- Unemployment insurance benefit records for program participants and potential comparison group members provided through data matches conducted by the Employment Security Department.

The purpose of a net impact analysis is to determine the extent to which the outcomes experienced by program participants were different than outcomes experienced by a similar group of people who did not participate in the program. For example, the net impact analysis shows whether the employment and earnings of participants were better, worse, or no different than the employment and earnings of similar people who did not participate in training. The differences are referred to as "net impacts." *The cost-benefit analysis compares the monetary value of net impacts with the program costs. The cost-benefit analysis includes the value of net impacts only and not the value of the gross outcomes.*

For the net impact and cost-benefit evaluation, Battelle collected data on all individuals who completed, or otherwise left, the programs during the 1991–92 school or program year, in addition to the 1993-94 year. Adding the 1991–92 participants for the net impact evaluation enables an analysis of longer-term, as well as the short-term effects. For the comparison groups, Battelle drew from individuals who registered with the state Employment Service during the same years and who had not participated in one of the programs in the study during the previous two years. *Battelle selected the comparison group to maximize the similarity between the participant and comparison groups in age, race and ethnicity, gender, education, region, and history of employment, earnings, welfare and unemployment insurance benefit receipt.*

The net impact evaluation analyzed eight main outcomes for the individuals: employment, hourly wage, hours of work, quarterly earnings, unemployment insurance benefits, Aid to Families with Dependent Children (AFDC), food stamps, and medical benefits (mostly Medicaid). It is important to note that the outcomes reported in the net impact sections of the report are not the actual outcomes of the participants. Instead, the participant outcomes are statistically adjusted to reflect what the results would be if the participant population was the same along all observed characteristics as the comparison group. The sections on employment and earnings report the actual outcomes for program participants. Unless otherwise noted, the results in the net impact sections are statistically significant at the .05 level.

For the cost-benefit analysis, Battelle calculated the value of the net impact on earnings, employee benefits (estimated at 20 percent of earnings), social welfare benefits, unemployment insurance benefits, and certain taxes. Battelle estimated the impact of the net change in earnings on unemployment insurance, social security, medicare, income, and sales taxes. Program costs include direct training program costs and support payments for services such as child care. Battelle calculated the benefits and costs for both the observed period of time and based upon a statistical model that estimated the benefits and costs out to the age of 65. In order to compare benefits and costs in terms of net present values, postprogram benefits and costs are discounted by 3 percent per year and all figures are stated in fourth quarter 1995 dollars.

The benefit and cost tables presented in this report are for the 1991–92 participants. This earlier group is used because the one-and-a-half years observed since 1993–94 is not enough time for the postprogram benefits to be greater than the program costs and three-and-a-half years of data enables more accurate forecasts to age 65. The later year, however, is used for secondary vocational education since data is not available for students who participated in 1991–92.

In considering the longer-term net impact and the cost-benefit results, the reader might wonder whether there were program changes between 1991–92 and 1993–94 that changed program results. An informal comparison of short-term results for the 1991–92 and the 1993–94 participants does not show any substantial pattern of difference in results between the two cohorts, with one exception. The short-term results for the 1993–94 JTPA, Title III participants appear to have been substantially better than for the 1991–92 participants.

Other caveats are the forecast model for welfare benefits is based upon the welfare system in place at the time of the study and does not include time limits and other changes in welfare eligibility being made in response to the 1996 federal welfare act. Also, three-and-a-half years of observed results for the 1991–92 participants is still a relatively short time for forecasting benefits to age 65.

Readers are cautioned to not make improper comparisons between programs since the evaluation methodology differed somewhat from one program to another, and the programs offer different types of services to different populations of participants for different purposes. A technical appendix on the evaluation methodology is available upon request.

Employer Demand for Training

This section presents the major findings from the employer survey. Results by industry sector, firm size, and region of the state are available upon request.

Based upon survey responses from 1,900 Washington employers, employers are experiencing significant difficulty in finding new employees with the skills needed for the types of jobs available in the state. The type of educational credential that employers most frequently have difficulty finding in job applicants is a vocational degree or certificate. Overall, employers believe the shortage of well-trained job applicants is hurting their firm's performance.

Skill Deficits

The study asked employers about their difficulty in finding qualified job applicants with certain kinds of abilities and job skills. *Fifty-five percent of employers indicated they recently experienced difficulty finding at least one particular skill.*[12] *Most frequently, firms reported difficulty finding new employees with "occupation-specific skills needed to do the job."* Ninety-two percent of the employers who had difficulty finding qualified applicants had difficulty finding applicants with such job-specific skills. The next most frequently cited skill deficits were problem solving or critical thinking skills and positive work habits and attitudes (84 and 83 percent, respectively). Also frequently mentioned were communication, adaptability to change, teamwork, accepting supervision, and computer skills; each mentioned by 70 to 78 percent of employers who had difficulty finding qualified applicants. (See Figure 3.)

Education and Training in Demand

In order to measure employer demand for different levels and types of educational credentials held by their new hires, the survey asked employers two different questions. To analyze recent experience employers were asked, "In general, how much difficulty has your firm/organization experienced in the last 12 months finding qualified applicants with the different education levels listed below?" To forecast future demand employers were asked, "Thinking about the personnel your firm/organization will need in the next five years, please indicate how you expect those needs to change for employees with different levels of educational attainment."

[12] The overview presents exact percentages. However, readers should not mistake the findings as having greater precision than they do. Sampling error for the surveys range up to plus or minus 4 percent.

Percentage of Employers Having Difficulty Finding Qualified Applicants With Specific Skills
(among employers reporting difficulty in the last 12 months)

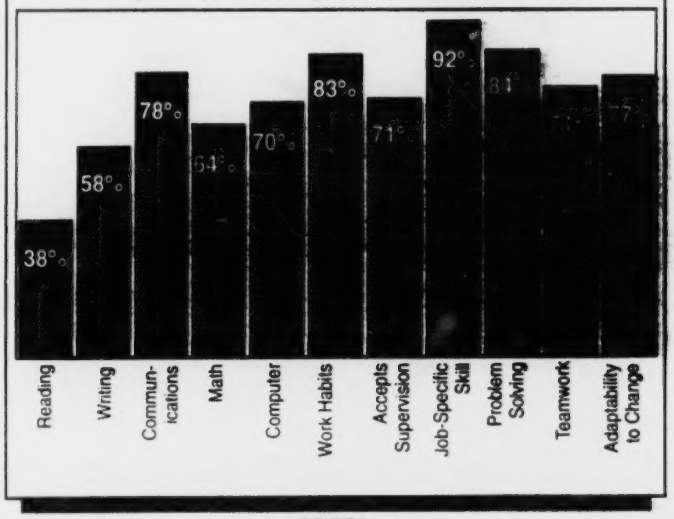

FIGURE 3

More than 80 percent of employers hiring for jobs requiring a vocational certificate or degree had difficulty finding qualified applicants over the past year. This was more than the percentage of employers reporting difficulty finding qualified applicants with any other type of educational credential. In comparison, among employers who attempted to find applicants with other educational credentials, 69 percent of employers reported having difficulty finding applicants with a graduate degree, 62 percent had difficulty finding applicants with an academic associate degree, and 58 percent of employers reported difficulty finding qualified applicants with a bachelor degree. Only about one-third of employers reported they had difficulty hiring qualified applicants with a high school diploma. (See Figure 4.)

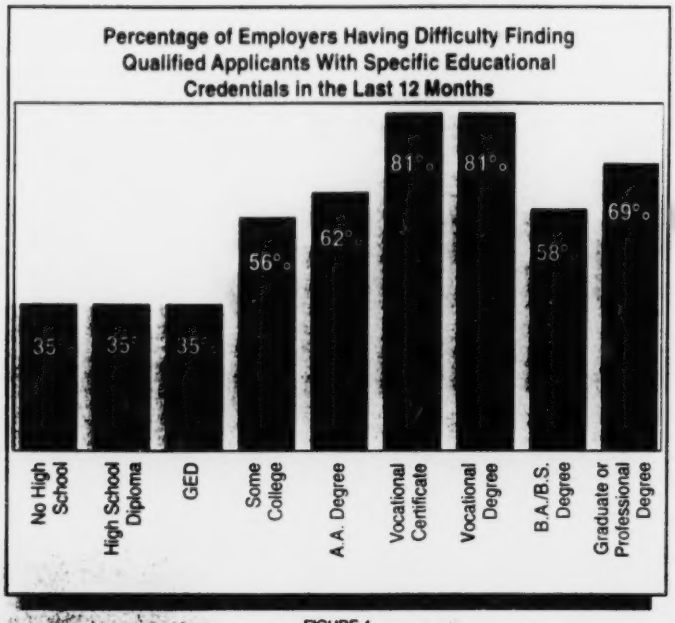

FIGURE 4

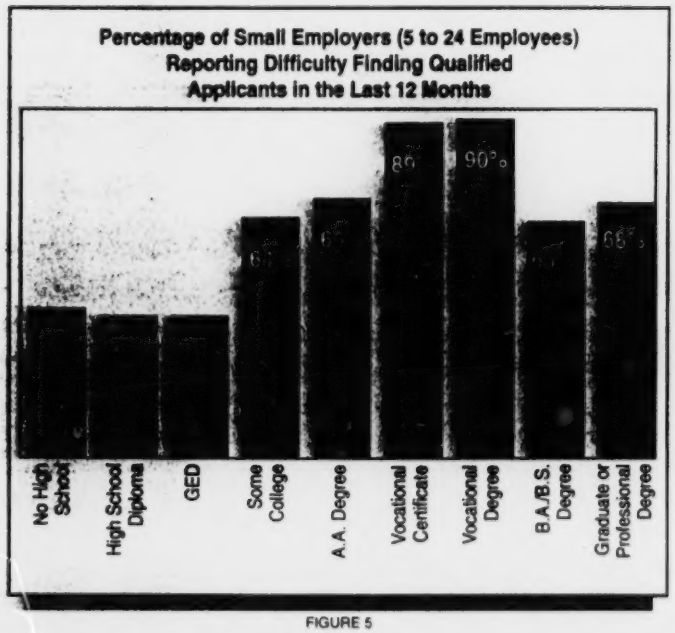

FIGURE 5

Small employers are more likely than large employers to have difficulty finding qualified job applicants at almost all educational levels. For example, among small firms (those employing between 5 and 24 employees), 90 percent of employers attempting to hire applicants with a postsecondary vocational degree had difficulty finding qualified applicants. In contrast, among firms employing 100 or more employees, 49 percent of firms that attempted to find applicants with a vocational degree had difficulty. The exception to this difference between small and large firms in finding applicants is at the graduate or professional degree level. There is no significant difference between the reported ability of small and large employers to find qualified applicants with a graduate or professional degree. (See Figures 4 and 5.)

Looking toward the future, more employers report they expect to have increased need for employees with a vocational degree or certificate than expect to have increased need for employees with any other type of postsecondary education. About 18 percent of employers expect to have an increased need for employees with a vocational credential, compared to

13 percent who expect an increased need for employees with an academic associate degree, 11 percent who expect an increased need for employees with a bachelor degree, and 7 percent who expect an increased need for employees with a graduate or professional degree.

In addition to their demand for well-trained new employees, employers would like a substantial portion of their current employees to have additional in-school training. Firms were asked what percent of their current employees need further training in a classroom program such as taught at a community college or vocational school to reach the level of productivity their firm wants. On the average, employers responded that 28 percent of their managers or supervisors; 27 percent of their office, clerical or sales employees; 22 percent of their professional or technical workers; 18 percent of their production workers; and 18 percent of their sales workers need additional classroom instruction.

These findings on the demand for postsecondary vocational training are consistent with the results of the Office of Financial Management's 1990 "Investment in Human Capital (IHC) Study," even though the exact questions asked were phrased somewhat differently and the studies are five years apart. The IHC Study also found that employers most frequently reported difficulty finding qualified workers with skills such as those taught at community and technical colleges. The IHC Study found that employers would like 24 percent of their current employees to receive further training in programs such as those taught at community or technical colleges. *The consistency of these results, five years apart and based on slightly different survey questions, strongly supports the reliability of these findings regarding employers' needs for postsecondary workforce training.*

Occupations in Demand

The study analyzed the difficulty that employers are having in finding qualified applicants for high demand occupations in the sub-baccalaureate labor market—jobs that require at least a high school education but less than a bachelor degree.[13] Employers responded to the survey that within this range they are having more difficulty in finding qualified applicants for occupations that require relatively more education and training.

Among the ten occupations expected to have the most job openings that require between two and four years of postsecondary education but not a bachelor degree, employers reported the greatest difficulty finding qualified applicants for automotive mechanics, first line supervisors in sales, managers and administrators, cooks, and carpenters. For each of these occupations, about half or more of the employers attempting to fill such positions during the last year reported finding few or no qualified applicants.

Among the ten occupations expected to have the most job openings over the next 15 years that require a high school education but less than two years of postsecondary education, firms reported the greatest difficulty finding qualified applicants for jobs as heavy truck drivers. This was the only high demand occupation at this education level with more than 35 percent of employers reporting they found few or no qualified applicants over the past year.

[13] The education requirements are according to the U.S. Bureau of Labor Statistics.

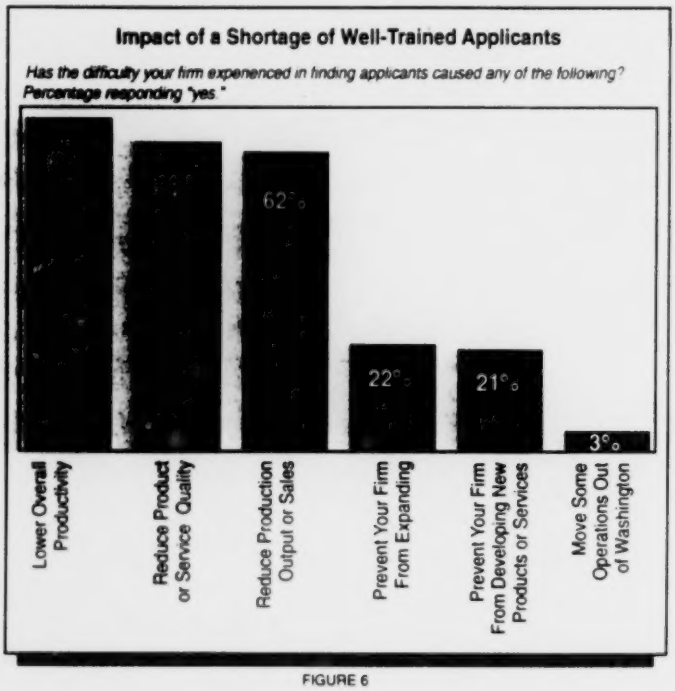
Impact of a Shortage of Well-Trained Applicants
Has the difficulty your firm experienced in finding applicants caused any of the following?
Percentage responding "yes."
62%
22%
21%
3%
Lower Overall Productivity
Reduce Product or Service Quality
Reduce Production Output or Sales
Prevent Your Firm From Expanding
Prevent Your Firm From Developing New Products or Services
Move Some Operations Out of Washington

FIGURE 6

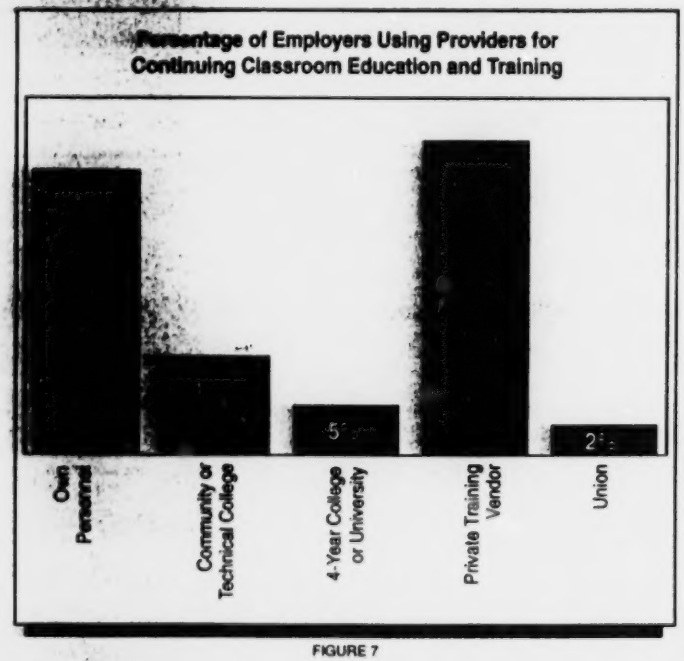
Percentage of Employers Using Providers for Continuing Classroom Education and Training
Own Personnel
Community or Technical College
4-Year College or University
Private Training Vendor
Union

FIGURE 7

Economic Impact of a Shortage of Well-Trained Applicants

Employers' difficulty in finding employees with the skills they need is hurting the state's economy. Among the 55 percent of employers who had difficulty finding qualified applicants during the past year, a large number indicated that the difficulty negatively affected their firms. Between 60 and 70 percent of employers who had difficulty (employing between 45 and 60 percent of the workforce) reported that it had lowered their firms' overall productivity, reduced product or service quality, or reduced production output or sales. (See Figure 6.) Among firms in high technology industries (computer software, electronics, biotechnology, and instrument manufacturing) 31 percent of the firms that had difficulty finding qualified applicants reported that it had prevented the development of new products.

Employer Provided Training

Publicly financed training programs are only part of the entire training system. A large portion of training is paid for directly by employers. This employer provided training may be conducted by firm personnel, by vocational schools or other private vendors, or by public providers contracted by the firm. In this section, the report analyzes employer training practices and the link to public programs.

According to Washington employers, employer provided training of employees is a common practice. Ninety-six percent of all employers provided at least four hours of some type of training to their employees during the last year. The most common type of employer provided training, provided by 93 percent of employers, is on-the-job training that takes place at the firm while the employees are performing their regular duties.

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Sixty-one percent of firms offered their employees at least four hours of classroom training either at or off the worksite during the last year. *Firms generally use either their own personnel (29 percent of all firms) or a private contractor (32 percent of all firms) to conduct classroom training.* (See Figure 7.)

Consistent with numerous other studies, including the IHC Study, firms reported they are more likely to provide classroom training to managers and professional employees than to wage workers. Employers were asked what percentage of employees of each type were provided at least four hours of classroom training during the last 12 months. On the average, employers responded that they provided classroom training to 59 percent of managers or supervisors; 53 percent of professional or technical workers; 45 percent of office, clerical or sales employees; 31 percent of production workers; and 29 percent of service workers.

About 17 percent of firms that provide classroom training and 10 percent of all firms reported using community or technical colleges to provide classroom training to their employees. Large firms are more likely than small firms to use community or technical colleges. Firms that reported using community or technical colleges employ about one-third of the state's private sector workforce. About twice as many firms use two-year colleges to train their incumbent employees as use four-year colleges and universities, and this ratio does not change when weighted by firm size.

Among the 39 percent of firms that reported not offering classroom training, the most frequently stated reason for not offering classroom training was that it was not needed (84 percent of firms). About 40 percent of firms without classroom training cited financial or time constraints.

In analyzing why firms do not more frequently contract with any type of public provider (secondary school, two- or four-year college, JTPA program, or other), the study found that "bureaucracy and red tape" was not a common reason (cited by only 15 percent of firms giving a reason). More frequently mentioned barriers were that "public training and education providers do not offer the type of training our employees need" (41 percent of employers stating a reason), and "the cost would be too high" (28 percent of employers who gave a reason for not contracting with a public training provider). Responses from employers who did contract with a public provider suggest that another possible area for improvement includes the convenience of the time and location that training is offered.

Although relatively few responses were received from employers who had a training arrangement with a public provider to train their employees, the responses suggest that substantial improvement is needed in the ability of public providers to meet employer needs in training incumbent workers. Eighty-four percent of firms that had a training arrangement with a public provider felt that most of their education or training needs were not met.

Washington workers who recently participated in one of the training programs included in the study appear to agree that employer provided training is a widespread practice. Between 43 and 58 percent of the participants who had been employed since leaving their program reported receiving at least four hours of on-the-job training from their employer and between 21 and 43 percent reported receiving at least four hours of classroom training at their place of work. The numbers vary by the type of public training program they had attended. Generally, between 12 and 19 percent of the former public training

participants reported that their employer paid for them to take at least four hours of classes at a school or college. However, the percentage reporting their employer paid for classes was considerably lower (5 percent) for the young employees who had recently attended a secondary vocational-technical education or a JTPA, Title II-C Youth program.

The former public training participants found their employer-provided training very useful. Between 62 and 70 percent of former public program participants reported that the training provided by their employer had been very worthwhile in its effect on their ability to do their job.

State Workforce Training Programs

In order to evaluate the state training system, the study focused on six of the largest public training programs: secondary vocational-technical education; postsecondary workforce training at community and technical colleges; Job Training Partnership Act (JTPA), Title II-A for Adults; JTPA, Title II-C for Youth; and JTPA, Title III for Dislocated Workers. These programs constitute about two-thirds of state expenditures on workforce development.[14] The largest of the six programs is postsecondary workforce training at community and technical colleges. Approximately five times as many individuals participate in college training as participate in the three JTPA programs combined. The study examined participants' characteristics, their training and related experiences, and their postprogram outcomes, including their demand for additional training. The main outcomes examined were the apparent competencies of the former participants, customer satisfaction (theirs and their employers), and their employment and earnings outcomes. The net impact evaluation examined whether the programs made a difference in participant employment, earnings, and social welfare benefits. And, the cost-benefit evaluation analyzed these differences compared to taxpayer costs.

Postsecondary Workforce Training at Community and Technical Colleges

Postsecondary workforce training is provided by the state's 32 community and technical colleges. Upon completion, the students may receive a vocational certificate or degree. Postsecondary training, also referred to here as vocational education or workforce training, does not include students who intend to transfer to a four-year college or university, and it does not include students enrolled only in a program to improve their basic skills to a high school level. It should also be noted, that only 6 percent of the 1993-94 college workforce training students were dislocated or other unemployed workers financed through the Employment and Training Trust Fund under ESHB 1988. The vast majority of students were funded through tuition and the State General Fund and were not unemployed workers.

For the study, information was obtained on all 20,342 vocational students who completed or otherwise left college during the 1993-94 academic year and who were enrolled for at least 10 credit hours. The study includes information on all these vocational students from the college enrollment records and information on all the students with employment reported for unemployment insurance purposes obtained from the state's unemployment insurance wage files. In addition, 234 of the students completed a telephone survey during the summer and fall of 1995.

[14] "Combining Washington's Workforce Training Funds," Workforce Training and Education Coordinating Board, 1995.

Participant Characteristics

College vocational students generally resemble the state's population for their age cohort except that they have higher levels of high school attainment. The students are fairly evenly divided between females and males (54 percent female), and the vast majority are of white non-Hispanic ethnicity (82 percent compared to 85 percent of the state's entire population). (See Figure 8.) At the time of enrollment, one-third were under the age of 25, one-third were between 25 and 34 years of age, 30 percent were between 35 and 49, and 5 percent were age 50 or older. Only five percent of the students did not possess a high school diploma or GED when they entered college, compared to 17 percent of the state's entire adult population.

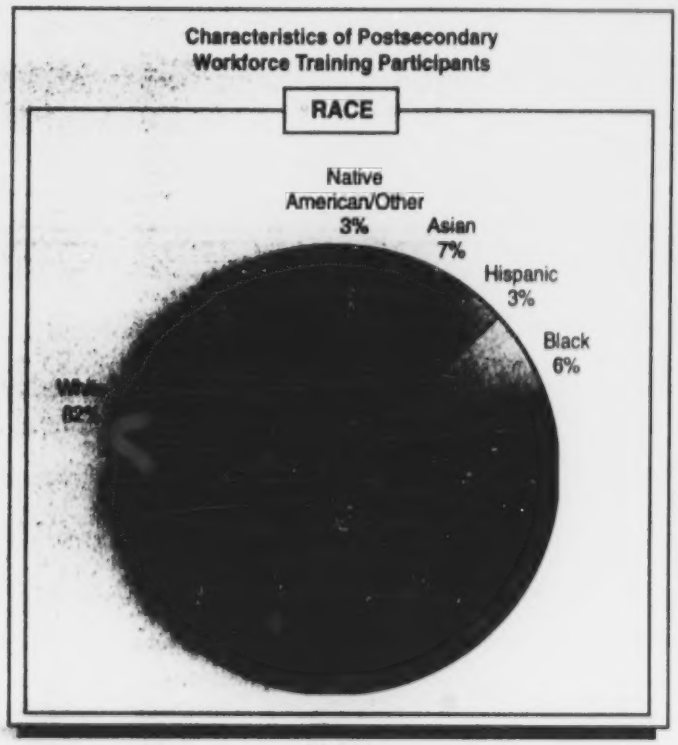

FIGURE 8

Among those students with employment reported for unemployment insurance purposes during the third quarter prior to enrollment, 59 percent earned less than $1,000 during the quarter, 27 percent earned between $1,000 and $5,000, and 14 percent earned over $5,000 in covered employment during the quarter.

Competencies

Perhaps the primary goal of workforce training and education is to prepare individuals with the skills and abilities required in the workplace. Consistent with this goal, the survey results indicate the most common reason vocational students had for enrolling in college was to get "skill training for a certain kind of job" (50 percent of the students), followed by "to get a job" (17 percent), and "to get a better job" (11 percent).

While they were enrolled, the vast majority of the students received training corresponding with job-related reasons for entering college. Based on the survey results, 86 percent of vocational students received training in skills to do a specific job or occupation, and 72 percent of those who received such training believed that their specific job or occupational skills improved significantly as a result, compared to only two percent who felt that these skills did not improve at all. (See Figure 9.)

Between 61 and 71 percent of the students received education or training in math, teamwork, communication, work habits, critical thinking, reading and writing, and computer skills. Between 35 and 50 percent of the students who received such training believed that the training significantly improved their

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skills, while only 2 to 8 percent believed that their skills did not improve at all (the remainder said that their skills improved somewhat).

Based upon matches with college student records, 14 percent of the 1993–94 vocational students were continuing their education at a community or technical college program the following school year.

Among those employed after their college program, according to the survey results, 75 percent of the students used one or more skills that they obtained during college training on their job. And of those, 82 percent indicated that the skill(s) was very useful in performing their job duties.

Employer survey results also show satisfaction with the skills of these workers. That information is presented below in the section on employer satisfaction.

Participant Satisfaction

The former students were generally satisfied with the characteristics of their college program. Sixty-five percent of the students found that their program "definitely met" their objectives, compared to only 9 percent who said that their college experience did not meet their objectives. Over 40 percent of the students were very satisfied and over 40 percent were satisfied with the overall quality of their program and the quality of teaching, compared to only about 14 percent who were dissatisfied.

For each program characteristic measured, students were more likely by a ratio of at least two to one to report that they were very satisfied than to report that they were dissatisfied. The only exception to this degree of satisfaction was length of program, although still 32 percent were very satisfied and 19 percent were dissatisfied. (It is unclear from the survey if the dissatisfied students found the program to be too long or too short.) There is also some apparent room for improvement in advice on course selection, although the results are mostly positive. Thirty-seven percent of the students were very satisfied with advice on course selection compared to 17 percent who were dissatisfied.

The survey also asked the former workforce training students about support services related to their college training. The services most frequently needed by the students were financial assistance, assistance with resume writing and job interviewing, career counseling,

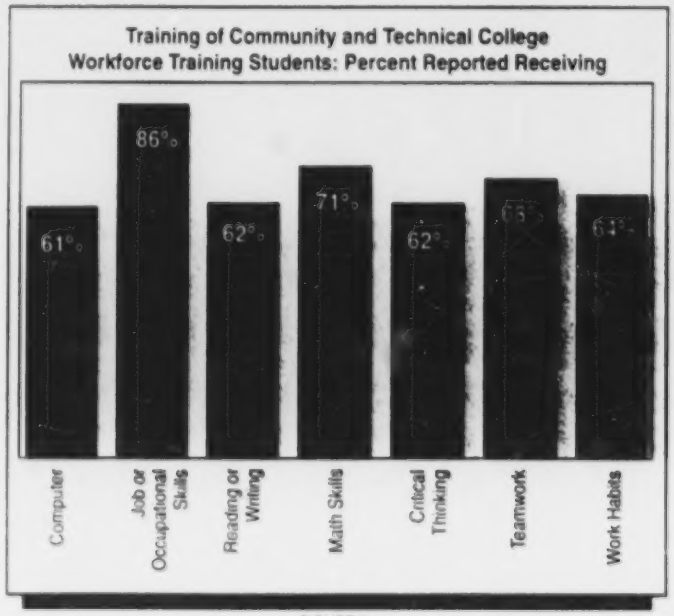

FIGURE 9

and job placement assistance. Between 37 and 47 percent of the students needed these services. Less frequently needed was information about other government programs (21 percent of the students), child care (10 percent), and transportation (needed by about 9 percent of the students). (See Figure 10.)

The students offered mostly favorable reviews as to whether their college was able to meet their needs for support services. For example, only 12 percent of the participants left the program with their need for financial assistance unmet. *On the other hand, job placement assistance was the need that was most frequently unmet.* Twenty-six percent of the participants left the program with their need for job placement assistance unmet. Among those who needed job placement assistance (37 percent of the participants) 70 percent did not believe their need was met. Another area that might be targeted for improvement is career counseling. Nineteen percent of the participants believe they left the program with their need for career counseling unmet. Among those who needed career counseling (41 percent of the participants) 46 percent did not believe their need was met. Among the few students who needed child care assistance (10 percent), 70 percent did not believe their need was met.

The survey results indicate that women were more likely than men to report they needed additional support services from their college. Women reported having higher levels of unmet needs than was indicated by men for assistance with resume writing and job interviewing, financial aid, and child care.

Support Service Needs of Community and Technical College Workforce Participants

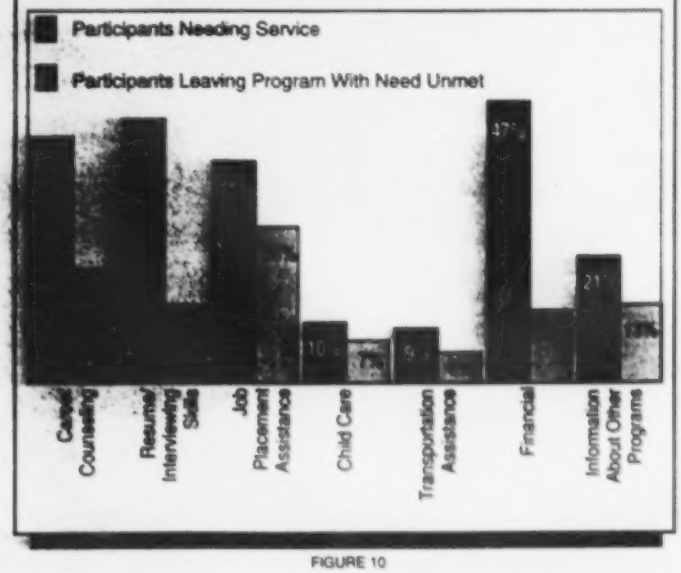

FIGURE 10

Employer Satisfaction

The employer survey asked firms to evaluate their new employees who had recently completed a vocational program at a community or technical college. ***Overall, the results indicate that employers were very satisfied with the quality and productivity of these new workers.*** Among employers who felt they were in a position to evaluate such employees, 87 percent were either very or somewhat satisfied with the overall quality of the former students' work. Eighty-four percent were satisfied with the former students' overall productivity. (See Figure 11.)

The skills most frequently rated highly by employers were job-specific skills (84 percent satisfied), teamwork (82 percent), communication (80 percent), reading (80 percent), work habits (78 percent), writing (70 percent), and problem solving or critical thinking (69 percent). The skills that had somewhat lower levels of satisfaction were math (61 percent satisfied) and computer skills (53 percent satisfied).

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Employment and Earnings

According to the survey responses, 80 percent of the 1993–94 vocational students were employed at the time of the survey in the summer or fall of 1995. (See Figure 12.) Twenty-four percent responded that they were employed in a manufacturing occupation, and 22 percent indicated they were employed in the health care industry. Twenty-four percent were employed in a clerical or sales position, and 11 percent indicated they were in a service occupation.

In order to find out more about the former students' postprogram employment and earnings, the student records were matched with the state's unemployment insurance wage files. This file contains information only on individuals with employment reported for unemployment insurance purposes (85 to 90 percent of the total employment in the state, with self-employment being the largest type of employment that is not covered). The matches, therefore, understate the total employment rate.[15]

Sixty-six percent of the 1993-94 vocational students were found to have employment reported for unemployment insurance purposes during the third quarter after they left their program. Seventy-one percent were either in reported employment in the third quarter or enrolled in a community or technical college program during the 1994-95 school year. Thirty-nine percent of those with reported employment worked an average of at least 37 hours per week during the quarter.

Employer Satisfaction of Firms That Hired Workers Who Had Recently Completed a Vocational Program at a Community or Technical College: Percent Who Were Very or Somewhat Satisfied With Certain Skills of Those Workers

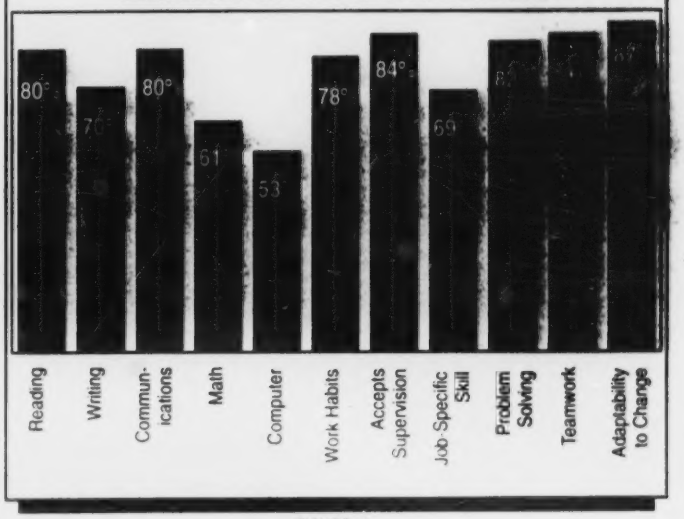

FIGURE 11

Employment of 1993–94 Postsecondary Workforce Training Students

Percent With Employment Reported for Unemployment Insurance Purposes the Third Quarter After Leaving Program	66%
Percent Self-Reporting Employment When Surveyed During the Summer of 1995	80%

FIGURE 12

[15] Battelle estimates that the employment rate for the postsecondary training students based on unemployment insurance wages likely understates the total employment rate by no more than 14 percentage points. This estimate is based upon survey information and varies for each program included in the study.

The mean wage of those with covered employment was $10.89 per hour, and the mean quarterly earnings were $4,421. The median wage was $9.25 per hour, and the median quarterly earnings were $3,903.[16] (See Figure 13.)

Three quarters after they left their college program, 64 percent of the former students with covered employment had sufficient individual earnings to support a family of three above the poverty level. Twenty-five percent had earnings that might be characterized as "family-wage"; twice the poverty level for a family of three.

According to the survey responses, 56 percent of those with a job received medical benefits as part of their employment, and 39 percent received pension benefits. Only 16 percent reported receiving some form of public assistance during the past 12 months (either Aid to Families with Dependent Children; Food Stamps; or the Women, Infants, and Children Supplementary Food Program).

Looking at the employment and earnings of only those students who completed their program by receiving a degree or certificate, 72 percent of the 1993-94 vocational completers were found to have employment reported for unemployment insurance purposes during the third quarter after they left their program. *The mean wage of completers with covered employment was $11.78 per hour, with $4,849 in quarterly earnings. In comparison, those who left their college vocational program before completing a certificate or degree had mean wages of $9.67 per hour and $3,836 in quarterly earnings.*

Most employment and earnings outcomes were higher for white males than for other groups of former students. Men had higher hourly wage rates and more hours of employment than did women and were more likely to have medical or pension benefits. Whites were more likely than students of color to be employed (except for Hispanics), to have higher wage rates, and to have higher quarterly earnings. Blacks and Native Americans had particularly low employment and earnings outcomes compared to whites. Generally, similar gender and race differences existed in their employment and earnings before the students entered college.

Employment and Earnings Reported for Unemployment Insurance Purposes of Postsecondary Workforce Training Students in the Third Quarter After Leaving Program	
Mean Quarterly Hours of Work of Those Working	396
Percent Employed an Average of 37 Hours Per Work Week of Those Working	39%
Mean Quarterly Earnings of Those Working	$4,421
Median Quarterly Earnings of Those Working	$3,903
Percent With Individual Earnings Above 100% Poverty Level ($2,984/quarter) of Those Working	64%
Percent With Individual Earnings Above 200% Poverty Level ($5,968/quarter) of Those Working	25%
Mean Hourly Wage of Those Working	$10.89
Median Hourly Wage of Those Working	$9.25

FIGURE 13

[16]Earnings are adjusted to reflect fourth quarter of 1994 dollars.

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Net Impacts

Postsecondary workforce training at community and technical colleges had strong positive net impacts on the employment and earnings of program participants compared to similar individuals who did not participate in training. In the long run, the training was also associated with a reduction in the percentage of individuals receiving social welfare benefits.[17]

Figure 14 shows the short-term net impacts of training at community and technical colleges. During the third quarter after the 1993–94 participants left training, there were positive net impacts on each measure of employment and earnings. The training was associated with an increase of 5.2 percentage points in employment as reported to the Department of Employment Security. Among those with reported employment, the impact on wage rates was a positive $1.20 per hour; the impact on hours worked in the quarter was 34 hours; and there was a large positive impact on mean quarterly earnings—$832. These were the differences between participant results and the employment and earnings of similar individuals who did not participate in one of the training programs included in the study.

During the third postprogram quarter, the training was also associated with small increases in the percentage of participants receiving certain social welfare benefits. The training was associated with an increase of 1.3 percentage points in the percentage of individuals receiving regular AFDC benefits and an increase of 3.1 percentage points in the percentage receiving medical benefits.

These findings appear somewhat puzzling given that the former participants have higher earnings. A more detailed look at the impacts for each postprogram quarter (not shown in the table) indicates that the increase in social welfare benefits diminishes during the post-program period, and soon there is a negative impact on the percentage of individuals receiving such benefits. This trend suggests that a short-term increase in receipt of social welfare benefits may be an artifact of a minority of the former students who had not yet found employment during the initial months after training.

[17] College students trained with funding under ESHB 1988, the Employment and Training Act, were not included in the net impact and cost-benefit evaluation of college vocational training. ESHB 1988 retraining has been the subject of a separate net impact evaluation.

Short-Term Net Impacts
Net Impacts During the Third Quarter (7 to 9 months) After Training at Community and Technical Colleges

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	63.4%	5.2%	68.6%
Mean Hourly Wage: *of those working*	$9.90	$1.20	$11.10
Mean Hours Worked: *per quarter of those working*	366 hours	34 hours	400 hours
Mean Quarterly Earnings: *of those working*	$3,705	$832	$4,537
AFDC: *percentage receiving regular aid*	5.2%	1.3%	6.5%
Food Stamps: *percentage receiving*	14.0%	2%**	14.2%**
Medical Benefits: *percentage receiving*	13.2%	3.1%	16.3%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*
*** Not a significant difference at the .10 level.*

FIGURE 14

The longer-term net impacts of training at community and technical colleges are shown in Figure 15. These are the net impacts three years after participants left training during the 1991–92 school year. *During the thirteenth postprogram quarter, the net impacts of the training on participant employment and earnings continued to be positive and in most cases the impacts were larger than they had been during the third quarter after training.*

The training was associated with a 7.7 percentage point increase in the percentage of individuals with employment reported to Employment Security. Among those with reported employment, the training was associated with a positive difference of $1.97 in hourly wages; an increase of 26 hours worked in the quarter; and a large gain of $1,062 in quarterly earnings.

During the thirteenth quarter, college training was associated with a decrease in the percentage of individuals receiving each type of social welfare benefit included in the table. The training was associated with 2.6 percentage points fewer individuals receiving unemployment insurance benefits; .6 percentage points fewer receiving regular AFDC; 2.4 percentage points fewer receiving food stamps; and 2.3 percentage points fewer receiving medical benefits.

Longer-Term Net Impacts
Net Impacts During the Thirteenth Quarter (3 years) After Training at Community and Technical Colleges

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	60.2%	7.7%	67.9%
Mean Hourly Wage: *of those working*	$11.09	$1.97	$13.06
Mean Hours Worked: *per quarter of those working*	403 hours	26 hours	429 hours
Mean Quarterly Earnings: *of those working*	$4,556	$1,062	$5,618
Unemployment Insurance: *percentage receiving*	8.3%	- 2.6%	5.7%
AFDC: *percentage receiving regular aid*	4.2%	- .6%	3.6%
Food Stamps: *percentage receiving*	11.3%	- 2.4%	8.9%
Medical Benefits: *percentage receiving*	11.0%	- 2.3%	8.7%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*

FIGURE 15

Benefits and Costs

During the first three-and-a-half years after leaving college, participant benefits were substantially greater than program costs to the public. The analysis forecasts, moreover, that participant benefits to age 65 will far outweigh public costs by a ratio of more than $16 in participant benefits per public dollar invested in college training.

For each additional participant in community and technical college training, the public, or taxpayer, cost is $6,543 over the length of their enrollment and the personal cost is $1,828 in tuition. During the first three-and-a-half years after leaving college, the average trainee will gain $9,005 in net earnings (earnings minus foregone earnings while in training) and $1,801 in employee benefits (such as health insurance and pension benefits). During the course of working life to age 65, the average trainee will gain $87,126 in net earnings and $17,425 in employee benefits. These are net gains compared to the earnings of similar individuals who did not receive training (discounted at 3 percent and in 1995 fourth quarter dollars). The ratio of participant

benefits to program costs, not considering impacts on social welfare benefits or taxes, is therefore $102,723 to $6,543, or 16 to 1.

The total public, or taxpayer, costs is less than the program costs because the training is associated with decreased state welfare expenditures as well as increased tax revenues. During the first three-and-a-half years after training, the public saved $257 in reduced expenditures on AFDC, food stamps, and medical benefits, and $967 on reduced unemployment insurance payments. From the time of leaving training to age 65, the public is forecasted to save $5,310 in welfare costs. Unemployment insurance payments, however, are expected to increase by $2,787. (Since the former students are more likely to be working most of the time, they are more likely to qualify for unemployment insurance when they do suffer unemployment.)

Tax revenues are also impacted by the change in participant earnings. During the first three-and-a-half years after training, the public gained an estimated $3,216 in additional unemployment insurance, social security, medicare, income, and sales taxes. During the entire post-training period to age 65, the gain in tax revenues is forecasted to be $31,409 per participant, far greater than the direct cost of college training.

Completers and Leavers

Unlike the other programs included in the study, the data system for the community and technical colleges allowed for separate analysis of both students who completed their training and those who left training before completing. A student is defined as a completer if he or she received a degree or certificate. A student is defined as a participant but a leaver if he or she completed at least 10 credit hours but did not receive a degree or certificate. *The results show that the net impacts of completing training are far greater than the net impacts of participating in, but not completing, training. The differences in impacts for the two groups generally increase over time. These are a very important findings, indicating the value of students' completion of a degree or certificate.*

During the third quarter after leaving training, the net impact on being employed in employment reported to Employment Security is an increase of 10.7 percentage points for completers compared to a reduction of 1.1 percentage points for students who left without completing. During the thirteenth postprogram quarter, the increase in completers' reported employment is 12.1 percentage points compared to 3.1 percentage points for leavers. Examining hourly wage rates, during the third postprogram quarter the net impact is $1.86 per hour for completers, and $.22 per hour for

Benefits and Costs of Postsecondary Training at Community and Technical Colleges

	FIRST 3.5 YEARS AFTER PROGRAM		*FORECAST TO AGE 65*	
	PARTICIPANT	PUBLIC	PARTICIPANT	PUBLIC
Earnings	$13,260		$91,381	
Employee Benefits	$1,801		$17,425	
Foregone Earnings	- 4,255		- $4,255	
UI Benefits	- $967	$967	$2,787	- $2,787
Welfare Benefits	- $257	$257	- $5,310	$5,310
Program Costs		- $6,543		- $6,543
Tuition	- $1,828		- $1,828	
Taxes*	-$2,320	$3,216	-$22,740	$31,409
TOTAL	$5,434	- $2,103	$77,460	$27,389

** Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.*

FIGURE 16

leavers. During the thirteenth postprogram quarter, the net impact is $3.14 per hour for completers and $.46 per hour for leavers. Turning to quarterly earnings, during the third quarter after training the net impact is $1,174 for completers and $329 for leavers, and during the thirteenth quarter, $1,653 for completers and $302 for leavers.

The earnings difference between completers and leavers more than offsets the additional public cost of a student staying in college until completion. The average public cost of a student completing training at a community or technical college is $8,350. During the first three-and-a-half years after training, the impact on completers' net earnings and employee benefits is $19,334. *The present value of the forecasted impact to age 65 is $179,481 in personal net earnings and employee benefits. This is a ratio of about $21 for each public dollar invested in a student completing college training. In addition, the public is forecasted to gain $54,975 in tax revenues generated from the increase in net earnings to age 65.*

The average public cost for a student participating in, but not completing, training is $4,679. During the first three-and-a-half years after training, the net impact on leavers' net earnings and employee benefits is $1,640. The forecasted impact to age 65 is $35,707 in personal net earnings and employee benefits. This is a ratio of about $7.60 for each public dollar invested in a student participating in, but not completing, college training. The public is forecasted to gain $10,727 in tax revenues generated from the increase in net earnings to age 65.

Demand for Additional Training

Finally, the student survey asked whether there were any job skills that they would like to improve either through their employer or through an educational institution or training program. The responses show that the demand for additional training is high. Seventy-three percent indicated that they wanted additional training. By far, the type of skills that the former students were most interested in improving were computer skills (cited by 35 percent of those interested in additional training) and skills to do a specific job or occupation (33 percent).

The survey also provides evidence that a significant percentage of former students would prefer that additional training be provided on the job, not in a classroom. *Asked to consider all the training they had received either from an educational institution or their employer, 30 percent responded that they had "too much classroom, not enough on-the-job training."* In comparison, only six percent responded that they had "too much on-the-job training, not enough classroom." However, the majority (58 percent) responded that they had "just the right mix of classroom and on-the-job training."

Areas for Possible Improvement

While overall the results are very positive, the findings suggest certain areas for improvement. The colleges might do more to meet student needs for career counseling and advice on course selection. During training, the colleges might target computer training for improvement and provide more opportunities for work-based or on-the-job training. Near the end and after training, the colleges might do more to assist students with finding a job. Finally, the provision of adequate support services related to training is particularly important for meeting the needs of women.

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Adult Basic Skills Education

The state's 32 community and technical colleges offer basic skills education to adults who are below a high school level in reading, writing, or math. While other organizations, such as community-based organizations, also provide adult basic skills education, the colleges provide instruction for the majority of adult basic skills students in the state. This section considers only adult basic skills education at the community and technical colleges.

Adult basic skills education includes courses in four categories:

1. Adult Basic Education providing remediation in reading, writing, and mathematics for adults whose skills are at or below the eighth grade level;

2. English-as-a-Second Language providing nontransfer-level instruction at competency levels ranging from beginning to advanced;

3. GED Test Preparation providing instruction in basic academic skills beyond adult basic education for those students whose goal is to pass the high school equivalency examination; and

4. High School Completion providing instruction in high school courses for adults who want to earn an adult high school diploma.

For the study, participant records were obtained on 27,655 adults who left Adult Basic Skills during the 1993 school year (July 1, 1993, to June 30, 1994) and did not return to a community or technical college for at least a year. Employment-related information was obtained from a match with the unemployment insurance wage files for those participants with employment reported for unemployment insurance purposes (85 to 90 percent of in-state employment). In addition, 257 former basic skills students completed the telephone survey during the summer of 1996. The survey sample excluded English-as-a-Second Language students due to the lack of funds for translators.

Participant Characteristics

Adult basic skills students tend to be less educated and racially more diverse and have less income than the state general population or other community and technical college students. As would be expected, when they entered the program many of the students (46 percent) did not have a high school diploma or GED. Twenty percent, however, did have a diploma or GED, and 10 percent had attended some college (25 percent did not indicate their education level). Forty percent of the students were 21 to 29 years of age, and 35 percent were 30 to 49 years of age.

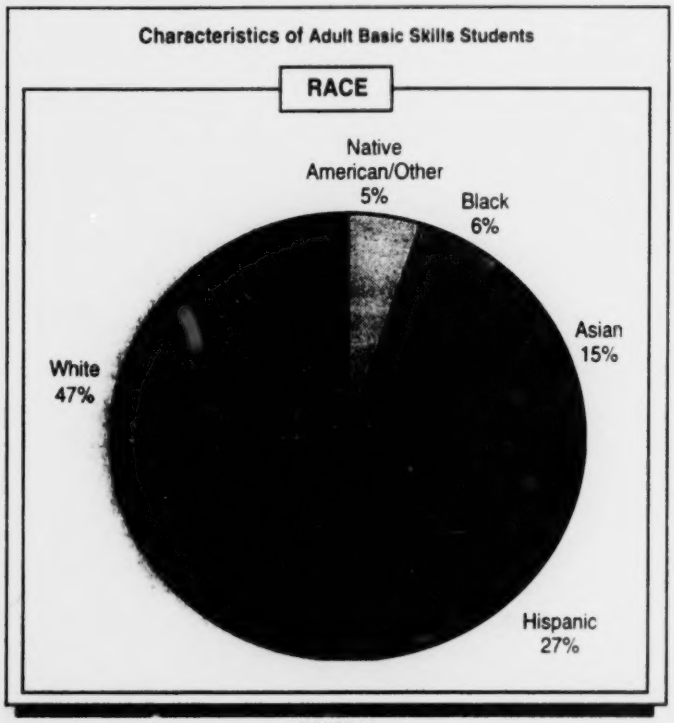

FIGURE 17

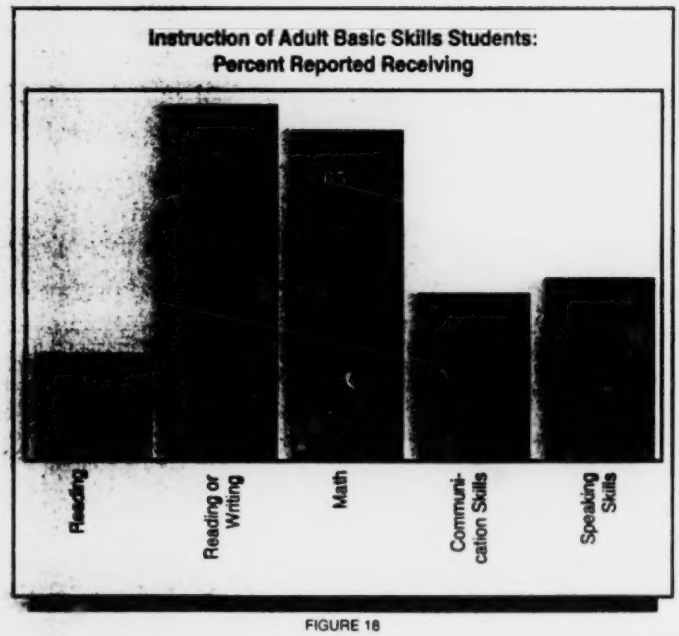

FIGURE 18

The majority of the students were people of color. Fifty-three percent of the students who left during 1993–94 were people of color (compared to 15 percent of the state population). Twenty-seven percent were Hispanic, 15 percent were Asian, and 6 percent were African-American. (See Figure 17.) Fifty-four percent were males.

At the time of entry, 43 percent of the students were employed according to the survey results. Among those students with employment reported for unemployment insurance purposes during the third quarter prior to enrollment, 76 percent earned less than $1,000 during the quarter, 19 percent earned between $1,000 and $5,000, and five percent earned $5,000 or more in covered employment during the quarter.

Competencies

When surveyed during the summer of 1996, the majority of the former basic skills students recalled receiving reading, writing, or math instruction while they were enrolled during the 1993–94 school year. Seventy percent indicated they received instruction in reading or writing, and 65 percent said they received instruction in math. Some recalled receiving instruction in other skill areas. About one-third reported they were trained in communication or speaking skills, and 21 percent received instruction in using computers. (See Figure 18.)

Slightly more than one-third of the students who recalled receiving instruction in reading, writing, or math said that these skills improved significantly. About 60 percent said these skills improved somewhat. Half of the former students who said they were trained in communication or speaking skills said these skills improved significantly. Only about one-quarter of those who said they received training in using computers, felt that their computer skills improved significantly.

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Female students were somewhat more likely than were males to report receiving instruction in each area, except in speaking skills where there was no significant difference. Hispanic students were more likely than were non-Hispanic whites to report training in each area, except communication skills where there was no difference. Hispanic students were much more likely to report their math skills improved significantly.

Among those employed after their college program, according to the survey results, 53 percent used the skills obtained from their basic skills program on their job. Of these, 78 percent said the skills were very useful in performing their job duties.

Employer perception of the competencies of these students is discussed below in the section on employer satisfaction.

Participant Satisfaction

Most of the former students were satisfied with their basic skills instruction, however, a sizeable minority said their objectives were not met. This may be due, at least in part, to dissatisfaction with support services.

Thirty-two percent of the basic skills students were very satisfied with the overall quality of their program, 62 percent were satisfied, and only six percent were dissatisfied. The students were particularly satisfied with the quality of the teaching and equipment. But while 48 percent said the program definitely met their objectives, 21 percent said that the program met their objectives not at all.

The support services most frequently needed by the students were financial assistance, career counseling, resume writing and job interviewing, and information about other government programs. In each case, about one-third of the students reported they needed the service. Also in each case, according to the survey responses, about one-quarter of all the students left the program with their need unmet. This means that among those students who said they needed the service, about three-quarters did not have their need met. Many of these services, such as financial assistance and career counseling are not part of basic skills services and must be obtained from outside the program.

Hispanic students were more likely than non-Hispanic whites to say that the program definitely met their objectives. Hispanic students, however, were more likely to say they left with their needs for support services unmet. They were more likely to have unmet needs in the areas of information about other government programs, assistance with resume writing and job interviewing, and with child care. Women were also more likely to be dissatisfied with child care. Twenty-two percent of the women students indicated they needed child care, and about three-quarters of these said their need was not met. Men, on the other hand, were more likely to need financial assistance and career counseling than were women and to have those needs unmet.

It is not clear whether length of enrollment affected satisfaction. Students who were enrolled for 100 or more hours of instruction were more likely to say that their objectives were definitely met, but just as likely to reply that their objectives were not met at all. Only 13 percent of the students said they were dissatisfied with the amount of training and only 7 percent said they were dissatisfied with the length of the program, and neither of these responses varied with whether they were enrolled for more or less than 100 hours of instruction.

Employer Satisfaction

The employer survey asked firms to evaluate their new employees who had recently completed a basic skills program at a community or technical college. The majority of employers were satisfied with most of the skills of such employees. Seventy percent of employers were either very or somewhat satisfied with their overall quality. Employers were especially likely to be satisfied with their work habits. About 80 percent of employers were satisfied with these employees' work habits and with their productivity. (See Figure 19.)

There are two skill areas where less than half of the employers were satisfied with these employees' skills. Forty-four percent of employers were satisfied with their math skills, and 47 percent were satisfied with their computer skills. Based on employer responses, there is also room for improvement in the reading and writing abilities of these workers. About 60 percent of employers were satisfied with their reading and writing skills. Between 60 and 66 percent of employers were satisfied with their problem solving, teamwork, and job specific skills.

Employer Satisfaction of Firms That Hired Workers Who Had Recently Completed an Adult Basic Education Program at a Community or Technical College: Percent Who Were Very or Somewhat Satisfied With Certain Skills of Those Workers

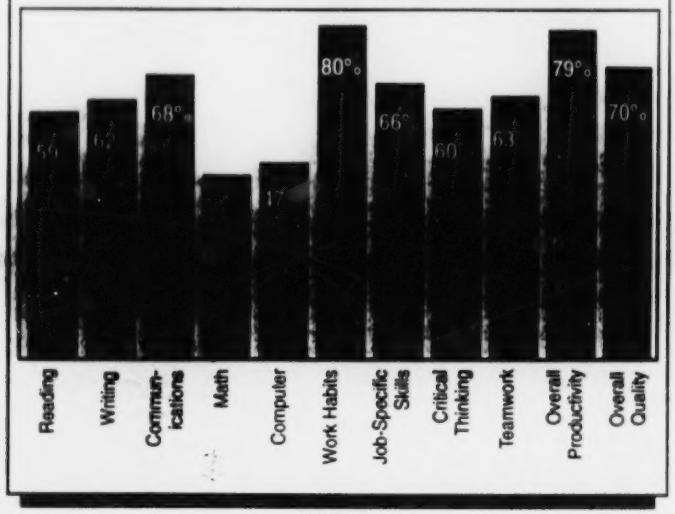

FIGURE 19

Employment and Earnings

According to the survey responses, 60 percent of the 1993–94 basic skills students were employed at the time of the survey in the summer of 1996. (See Figure 20.) Twenty-nine percent said they were employed in a manufacturing occupation, 27 percent said they were in a service job, and 17 percent said they were in a clerical or sales position.

Forty-two percent of the adult basic skills students were found to have employment reported for unemployment insurance purposes during the third quarter after they left the program. (The unemployment insurance wage file includes between 85 to 90 percent of the employment in Washington and does not include out-of-state employment.) Thirty-five percent were in covered employment at least 37 hours per week on the average during the third quarter. *The mean wage of those with covered employment was $8.26 per hour, and*

Employment of 1993–94 Adult Basic Skills Students

Percent With Employment Reported for Unemployment Insurance Purposes the Third Quarter After Leaving Program	42%
Percent Self-Reporting Employment When Surveyed During the Summer of 1995	60%

FIGURE 20

the mean quarterly earnings was $3,111. The median wage was $7.01 per hour, and the median quarterly earnings was $2,760. (See Figure 21.)

The third quarter after they left college, 46 percent of those in covered employment individually had sufficient quarterly earnings (if continued all year) to support a family of three above the poverty level. Ten percent had earnings that might be characterized as "family-wage"—twice the poverty level for a family of three.

According to the survey responses, 38 percent of those employed had health benefits provided by their employer, and 29 percent had pension benefits.

Thirty-three percent of the former basic skills students reported receiving some form of public assistance during the past 12 months (either Aid to Families with Dependent Children (AFDC), Food Stamps, or the Women, Infants and Children Supplementary Food Program).

Women were about as likely as were men to be employed after they left their basic skills program, but earned less. Women who were employed during the third quarter after they left their program were typically paid about one dollar less per hour than were men. Women were more likely than were men to be employed in a service, professional, clerical, or sales position, and less likely to have a manufacturing job.

American Indians tended to have lower earnings after the program than did other race or ethnic groups. American Indians were less likely to be employed during the third quarter after leaving their program, and those who were employed typically had fewer hours of work. Asians had the highest average quarterly earnings, due to the highest average number of hours worked. The average hourly wage rates of African Americans and Hispanics were somewhat lower than were the wage rates of whites. When surveyed in the summer of 1996, however, Hispanics were more likely than were whites to report they were employed.

Net Impacts

Adult basic skills education at community and technical colleges, for students who enrolled for reasons related to work, had mixed impacts on the employment and earnings of program participants. The instruction was associated with a decline in the percentage of people working in employment reported to Employment Security and an increase in the

Employment and Earnings Reported for Unemployment Insurance Purposes of Adult Basic Skills Students in the Third Quarter After Leaving Program	
Mean Quarterly Hours of Work of Those Working	368
Percent Employed an Average of 37 Hours Per Work Week of Those Working	35%
Mean Quarterly Earnings of Those Working	$3,111
Median Quarterly Earnings of Those Working	$2,760
Percent With Individual Earnings Above 100% Poverty Level ($2,984/quarter) of Those Working	46%
Percent With Individual Earnings Above 200% Poverty Level ($5,968/quarter) of Those Working	10%
Mean Hourly Wage of Those Working	$8.26
Median Hourly Wage of Those Working	$7.01

FIGURE 21

use of social welfare benefits. There was, however, a positive impact on the number of hours and the earnings of those who do work. Both the positive and negative effects associated with instruction were felt more strongly in the short run. In the long run, positive impacts on earnings declined while the disadvantages in employment rates and usage of social welfare benefits improved.

Before examining in more detail the net impact results, several points need to be mentioned. First, *the net impact and cost-benefit evaluation is restricted to those students who indicated they enrolled in adult basic skills education, including English-as-a-second language, for reasons related to work.* This is about one-third of college adult basic skills students. The evaluation limits the students to this group since the net impact and cost-benefit analysis primarily concerns labor market outcomes and these were the students who enrolled for labor market reasons. Other students may have been more interested in other types of gains, such as personal improvement, that were not measured in this study.

Second, *the study is limited to those students who enrolled in basic skills only. It does not include students who enrolled in a vocational program and who took basic skills to supplement their training. The evaluation, therefore, has nothing to say about programs that integrate basic skills with vocational training.*

Third, it is more difficult to construct an appropriate comparison group for adult basic skills students than for the other programs. This is because the distinguishing characteristic of these students is the lack of basic skills or, in the case of nonnative English speakers, lack of English proficiency. There is no data available on the actual basic skills or English proficiency of the comparison group. While the comparison group was constructed to have the same education as the adult basic skills participants, obviously, individuals can have the same number of years of education and still have different levels of basic skills. Also, English-as-a-second language status may include individuals who are fully bilingual and individuals who lack literacy in either English or their native language. English-as-a-second language status information was not available for the 1991–92 comparison group.

Short-Term Net Impacts
Net Impacts During the Third Quarter
(7 to 9 months) After Leaving Adult Basic Skills Education
(for participants who enrolled for reasons related to work)

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	52.8%	- 7.9%	44.9%
Mean Hourly Wage: *of those working*	$7.90	$.33	$8.22
Mean Hours Worked: *per quarter of those working*	326 hours	29 hours	355 hours
Mean Quarterly Earnings: *of those working*	$2,635	$359	$2,994
AFDC: *percentage receiving regular aid*	6.3%	3.0%	9.3%
Food Stamps: *percentage receiving*	19.2%	4.0%	23.2%
Medical Benefits: *percentage receiving*	18.5%	5.4%	23.9%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*

FIGURE 22

Figure 22 shows the short-term net impacts of work-related adult basic skills education at community and technical colleges. During the third quarter after the 1993–94 participants left

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college, the instruction was associated with a decrease of 7.9 percentage points in employment as reported to Employment Security. Among those with reported employment, the impact on wage rates was a positive $.33 per hour; the impact on hours worked in the quarter was 29 hours; and the impact on mean quarterly earnings was $359. During the third postprogram quarter the instruction was associated with moderate increases in the percentage of participants receiving certain social welfare benefits. The instruction was associated with an increase of 3.0 percentage points in the percentage of individuals receiving regular AFDC benefits; an increase of 4.0 percentage points in the percentage receiving medical benefits; and an increase of 5.4 percentage points in the percentage receiving medical benefits.

Figure 23 shows the longer-term net impacts of work-related basic skills instruction at community and technical colleges. These are the net impacts three years after participants left instruction during the 1991–92 school year. During the thirteenth postprogram quarter, the net impacts of the instruction on participant employment and earnings continued to be mixed.

The instruction was associated with a 3.7 percentage point decline in the percentage of individuals with employment reported in Employment Security files. Among those with reported employment, the instruction was associated with no significant difference in hourly wages; however, there was an increase of 30 hours worked in the quarter and a $292 increase in quarterly earnings.

During the thirteenth quarter, college basic skills instruction was again associated with mixed impacts on the receipt of social welfare benefits. The instruction was associated with 2.1 percentage points fewer individuals receiving unemployment insurance benefits and .8 percentage points fewer receiving food stamps. On the other hand, .9 percentage points more individuals were receiving regular AFDC benefits and there was no significant difference in the percentage receiving medical benefits (at the .10 level).

Longer-Term Net Impacts
Net Impacts During the Thirteenth Quarter (3 years) After Leaving Adult Basic Skills Education (for students who enrolled for reasons related to work)

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	49.4%	- 3.7%	45.7%
Mean Hourly Wage: *of those working*	$9.05	- $.05**	$9.00**
Mean Hours Worked: *per quarter of those working*	363 hours	30 hours	393 hours
Mean Quarterly Earnings: *of those working*	$3,361	$292	$3,653
Unemployment Insurance: *percentage receiving*	10.0%	- 2.1%	7.9%
AFDC: *percentage receiving regular aid*	5.9%	.9%	6.8%
Food Stamps: *percentage receiving*	18.8%	- .8%**	18.0%**
Medical Benefits: *percentage receiving*	17.8%	1.1%***	18.9%***

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*
*** Not a significant difference at the .10 level.*
****Not significant at the .05 level.*

FIGURE 23

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Benefits and Costs

During the first three-and-a-half years after leaving college, adult basic skills students experienced increased earnings and employee benefits, but these increases in participant benefits were less than the program costs to the public. Moreover, the analysis forecasts that participant earnings and benefits to age 65 will still fall short of public costs.

For each additional participant in adult basic skills education, the public, or taxpayer cost is $1,261 over the length of enrollment (see Figure 24). There is no tuition. During the first three-and-a-half years after leaving college the average student gained $336 in net earnings (earnings minus foregone earnings while in school) and $80 in employee benefits (such as health insurance and pension benefits). These are net gains compared to the earnings of similar individuals who did not receive training during the time period in the study (discounted at 3 percent and in 1995 fourth quarter dollars). During the course of working life to age 65, Battelle estimates that there will be no additional net gain. This is because the earnings net impact declines over time and reaches zero. *The ratio of participant benefits to program costs is therefore, without considering impacts on social welfare expenditures or taxes, $451 to $1,261.*

The total public, or taxpayer, costs is higher than the program costs because the instruction is associated with increases in state social welfare expenditures. As discussed earlier, adult basic skills instruction is associated with certain increases in social welfare benefits. During the first three-and-a-half years after college, public expenditures on AFDC, food stamps, and medical benefits increased by $422, but public expenditures on unemployment insurance benefits decreased by $527. From the time of leaving training to age 65, the public is forecasted to save $46 in welfare costs, but unemployment insurance payments are expected to increase by $961.

The estimated impact on tax revenues is small. During the first three-and-a-half years after the program, the public gained an estimated $136 in additional unemployment insurance, social security, medicare, income, and sales taxes. During the course of working life to age 65, Battelle estimates that there will be no further gain in tax revenues since the net impact on earnings is forecasted to reach zero.

Costs of Adult Basic Skills Education
(for students who enrolled for reasons related to work)

	FIRST 3.5 YEARS AFTER PROGRAM		FORECAST TO AGE 65	
	PARTICIPANT	PUBLIC	PARTICIPANT	PUBLIC
Earnings	$456		$456	
Employee Benefits	$75		$75	
Foregone Earnings	- $80		- $80	
UI Benefits	- $527	$527	$961	- $961
Welfare Benefits	$422	- $422	- $46	$46
Program Costs		- $1,261		- $1,261
Taxes*	- $98	$136	- $98	$136
TOTAL	$248	- $1,020	$1,268	- $2,040

** Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.*

FIGURE 24

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Demand for Additional Training

According to the survey, 80 percent of the former adult basic skills students would like additional training. *The largest number wanted additional training in specific job skills—39 percent—and 29 percent wanted additional training in computer skills.* Nineteen percent said they wanted additional instruction in basic skills.

When asked about the mix of classroom and on-the-job training that they had received from either a program or an employer, 37 percent responded they had received the right mix. About 10 percent said they received too much classroom and too little on-the-job training, and about 10 percent indicated the reverse.

Areas for Improvement

Students in adult basic skills instruction tend to be less educated and poorer than other community and technical college students. Consideration of the program results should take into account these demographic factors.

Nonetheless, *the results indicate that substantial changes should be made in adult basic skills education at community and technical colleges. This is especially the case with instruction for students who enroll for reasons related to work. The net impact and cost-benefit evaluation finds that such instruction, when not coupled with vocational training, generally had benefits that are less than program costs.*

Most of the former students were satisfied with their basic skills instruction, however, many more said their skills improved "somewhat" rather than "significantly," and a sizeable minority said the program did not meet their objectives at all. The responses of many of their employers, indicate the preference for their basic skills to be stronger, particularly their math skills. While most employers were satisfied with these former students' workplace skills, significant minorities of employers were dissatisfied with their teamwork, problem solving, and job-specific skills. The results also suggest that for many people basic skills instruction alone is not sufficient to eliminate the need for public assistance.

The survey responses indicate that support services could be improved for those students who need them. Based on student responses, the support services most in need of improvement are career counseling, assistance with resume writing and job interviewing, information about other government programs, and financial assistance. Hispanic students were the most likely to indicate the need for improved support services. Child care was of particular concern to women. The student survey responses also suggest the program could be improved by a stronger link with workplace and computer skills. Only about half of those who were employed in the summer of 1996 said they used the skills they learned in their basic skills program on their job. The type of additional training most frequently wanted by the former students was training in specific job skills and computer skills. Coupled with the findings on skill satisfaction from the employer survey, these results suggest that the students could benefit from greater integration of occupational training and workplace experience with instruction in basic and computer skills.

Job Training Partnership Act, Title II-A for Adults

The Job Training Partnership Act (JTPA), Title II-A program serves only low income adults, age 22 and older, who have barriers to success in school or employment. Up to 10 percent of the participants can exceed the income criteria, so long as they have other barriers. Evidence of barriers include low levels of literacy, dropping out of high school, a criminal record, and receipt of Aid to Families with Dependent Children. When *considering the outcomes of JTPA, Title II-A it is important to remember the program serves only the disadvantaged.*

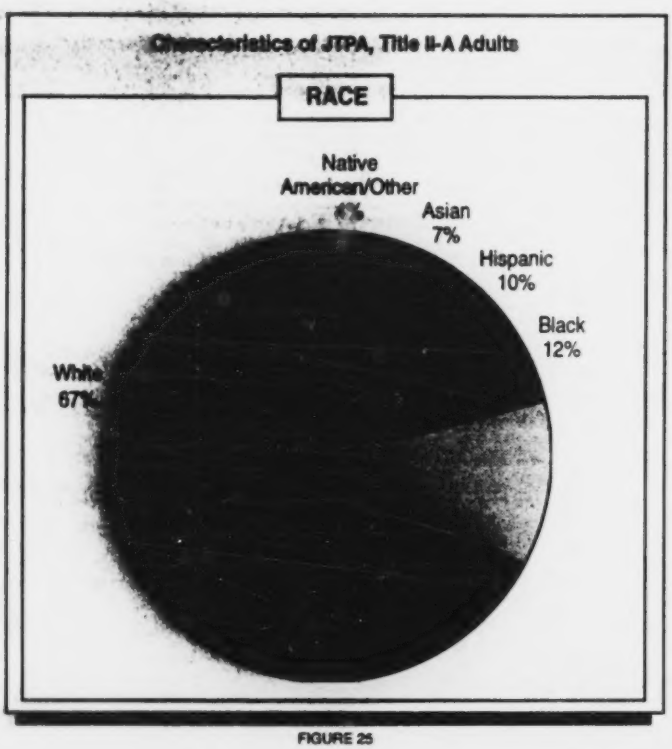

FIGURE 25

JTPA, Title II-A provides a variety of training and employment related services including occupational training, basic skills instruction, and job search assistance such as career counseling, resume preparation, and job referrals. The program is administered at the state level by the Employment Security Department. At the local level, administration is through 12 Service Delivery Areas, each headed by a Private Industry Council (PIC) in partnership with local elected officials. PICs may either provide services directly or purchase services from other providers. Occupational training may occur at either a training institution such as a community or technical college, or private vocational school, or at a worksite.

For the study, participant records were obtained on 4,371 adults who left the program during the 1993 program year (July 1, 1993, to June 30, 1994). Their participation ranged from a single incident of service to the full range of services offered by the program. On the average, the participants were in the program for about six months. Employment-related information was obtained from a match with the unemployment insurance wage files for those participants with employment reported for unemployment insurance purposes (85 to 90 percent of in-state employment). In addition, 280 former participants responded to the telephone survey conducted during the summer and fall of 1995.

Participant Characteristics

Participants in JTPA, Title II-A are less educated, poorer, and more likely to be a racial or ethnic minority than the state general population. Thirty-three percent of the participants who left during 1993-94 were people of color (compared to 15 percent of the state population). Twelve percent were African-Americans, 10 percent were Hispanic, and seven percent were Asian. (See Figure 25.)

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Sixty-three percent were women. About 32 percent did not have a high school degree or GED when they entered the program (compared to 17 percent of all adults in the state 18 years of age or older).

Among those participants with employment reported for unemployment insurance purposes during the third quarter prior to enrollment, 76 percent earned less than $1,000 during the quarter, 21 percent earned between $1,000 and $5,000, and three percent earned over $5,000 in covered employment during the quarter.

Competencies

Based on the survey results, 39 percent of the participants entered the program primarily to get some type of skills training, either occupational or basic skills. But the majority of the participants (54 percent) entered JTPA, Title II-A for the primary purpose of getting a job.

About half of the participants reported they received the following types of occupational or workplace training: skill training for a specific job (52 percent), computers (51 percent), teamwork (51 percent), work habits (51 percent), communication (45 percent), and critical thinking (45 percent). However, *less than half of the participants indicated they received instruction in basic skills*—41 percent were instructed in math and 34 percent were taught reading/writing. (See Figure 26.) In each case, about half of the participants (44 to 58 percent) who were trained in a skill reported that the skill improved significantly as a result, and generally 10 percent or less reported that their skill improved not at all, although 15 percent reported that their computer skill improved not at all. (The remainder said that their skills improved somewhat.)

Among those employed when the survey took place in the summer of 1995, 59 percent reported that they used one or more of the skills obtained from the training on their job, and among those, 84 percent indicated that the skill(s) was very useful in performing their job.

In all, these results suggest that those participants who received skill training generally felt that it improved their skills. But many participants did not receive skill training, particularly in basic skills. Only about 15 percent of all participants felt that their basic skills improved significantly as a result of the program.

However, a substantial percentage of the participants were continuing their education the following school year. Based upon computer matches, sixteen percent were enrolled in a community or technical college program during the year after they were in JTPA, Title II-A.

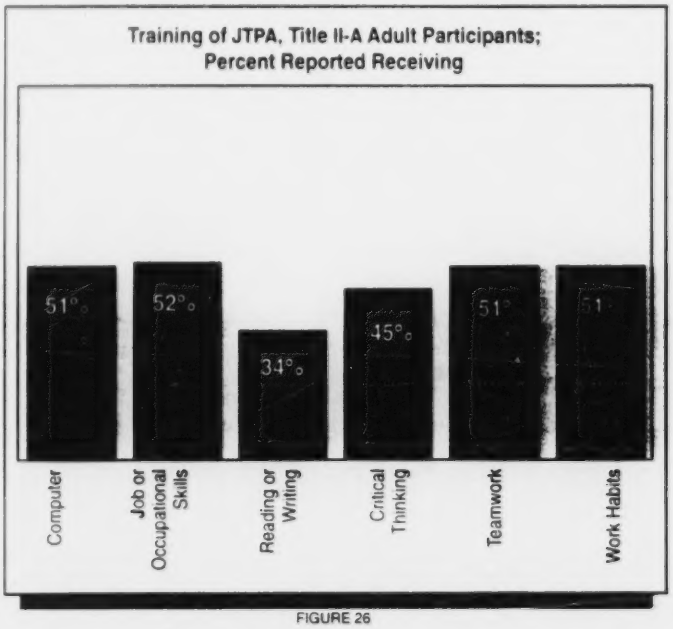

FIGURE 26

Additional information on participant competencies is presented below in the section on employer satisfaction.

Participant Satisfaction

The survey results indicate that the participants were mostly satisfied with their JTPA, Title II-A program. About half stated that the program definitely met their objectives compared to only 15 percent who said their objectives were not met at all. However, there were certain areas of substantial dissatisfaction.

By a ratio of about three to one, more participants reported that they were very satisfied with the overall quality of the program, the quality of the teaching, and that the program definitely met their objectives, than reported that they were dissatisfied. Consistent with the information above on skills training, 24 percent of the participants were dissatisfied with the extent to which training provided them with practical skills that employers want, although 37 percent reported being very satisfied. Another area of some dissatisfaction was with the length of the program. Twenty-three percent were dissatisfied with the length of the program and 23 percent were very satisfied. It seems likely, given the average length of the program, that most of the dissatisfied participants felt the program was too short to meet their needs. The survey results offer some evidence supporting this idea in that women were more likely than were men to be satisfied with the program and their average stay was nearly twice as long.

As stated in the beginning description of the program, JTPA, Title II-A provides a variety of employment-related services in addition to basic skills and occupational training. ***Based on the survey results, most of the participants who needed employment services and other support services did indeed receive such service; and in most cases, their needs were met.***

The services most frequently needed by the participants were: job placement assistance (needed by 66 percent), financial assistance (58 percent), career counseling (56 percent), assistance with resume writing or job interviewing (55 percent), and information about other government programs (needed by 41 percent of the participants). (See Figure 27.) In most cases, over 70 percent of those needing a particular service received that service, and the majority indicated that their need was met.

There were, however, services where a substantial percentage of participants report they left the program with their need unmet.

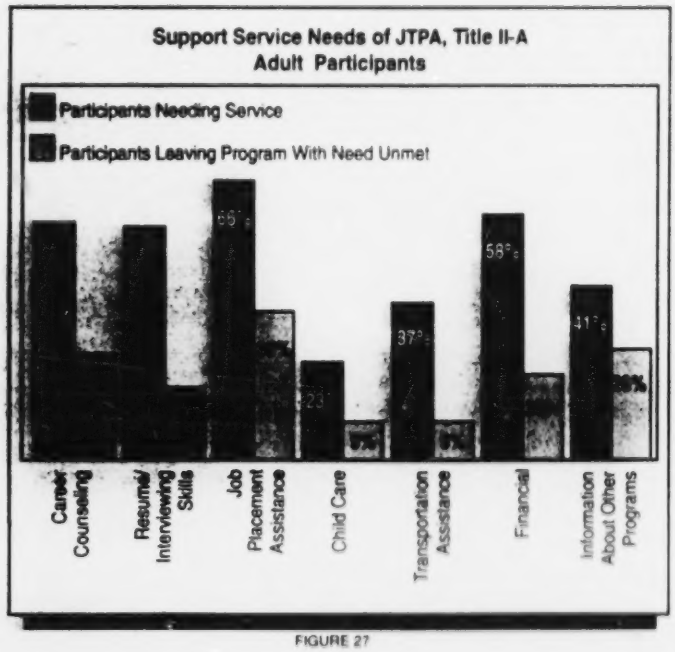

FIGURE 27

Thirty-five percent of the participants left with their need for job placement assistance unmet, 26 percent left with their need for information about other government programs unmet, 25 percent left with their need for career counseling unmet, and 20 percent reported leaving with their need for financial assistance unmet.

In two cases—job placement and information about other programs—less than half of the participants who needed assistance reported that their need was met when they left the program. Among the 66 percent of participants who reported they needed job placement assistance, only 47 percent ended the program with their need met. Among the 41 percent of participants who reported they needed information about other government programs, only 37 percent ended the program with their need met.

Among the 25 percent of the participants who did not complete their program, based upon the survey responses, few left because of dissatisfaction with the program. Only 13 percent gave dissatisfaction as the reason why they left the program. About one-third of those who left the program before completing left because they found a job.

Overall, women were generally more satisfied with the program than were men. They were more likely to report receiving skills training and to be satisfied with the training. They were also more likely than men to report receiving other types of services and that the services met their need. However, women did have higher levels of unmet needs for career counseling, assistance with resume writing and job interviewing, and child care.

Employer Satisfaction

It was not feasible to separately ask employers about each of the three JTPA programs included in the study (JTPA, Titles II-A, II-C, and III). Employers were instead simply asked about workers who had been trained "by JTPA." This section covers employer satisfaction with new employees who completed any type of JTPA program. Moreover, relatively few employers felt that they were in a position to evaluate new employees who had recently completed a JTPA program. Therefore, these findings on employer satisfaction must be treated with caution.

Generally, employers reported being satisfied with the quality of new employees who had recently completed a JTPA program. A little over 70 percent of employers who felt they were in a position to evaluate such workers reported that they were satisfied with their overall quality and productivity. There were, however, certain skills that could be stronger, including computer skills (33 percent of employers satisfied), problem solving and critical thinking (44 percent satisfied), and math (54 percent of employers satisfied). In other skill areas, at least 64 percent of employers reported being satisfied.

Employment and Earnings

According to the survey responses, 59 percent of the 1993-94 JTPA, Title II-A participants were employed by the summer of 1995. (See Figure 28.) The majority reported being

Employment of 1993–94 JTPA, Title II-A Participants	
Percent With Employment Reported for Unemployment Insurance Purposes the Third Quarter After Leaving Program	54%
Percent Self-Reporting Employment When Surveyed During the Summer or Fall of 1995	59%

FIGURE 28

employed in either clerical or sales positions (32 percent) or service jobs (21 percent). Nineteen percent reported being employed in manufacturing occupations and six percent indicated they were in the health care industry.

Fifty-four percent of the JTPA, Title II-A participants were found to have employment reported for unemployment insurance purposes during the third quarter after they were enrolled. (The unemployment insurance wage file includes between 85 to 90 percent of the employment in Washington and does not include out-of-state employment).[18] Fifty-five percent were either in reported employment in the third quarter or enrolled in a community or technical college program during the 1994-95 school year. Thirty-two percent were in covered employment at least 37 hours per week on the average during the third quarter. *The mean wage of those with covered employment was $7.99 per hour with an average quarterly earnings of $2,841. The median wage was $7.07 per hour with $2,697 in quarterly earnings.* (See Figure 29.)

Employment and Earnings Reported for Unemployment Insurance Purposes of JTPA, Title II-A Adults in the Third Quarter After Leaving Program	
Mean Quarterly Hours of Work of Those Working	353
Percent Employed an Average of 37 Hours Per Work Week of Those Working	32%
Mean Quarterly Earnings of Those Working	$2,841
Median Quarterly Earnings of Those Working	$2,697
Percent With Individual Earnings Above 100% Poverty Level ($2,984/quarter) of Those Working	45%
Percent With Individual Earnings Above 200% Poverty Level ($5,968/quarter) of Those Working	6%
Mean Hourly Wage of Those Working	$7.99
Median Hourly Wage of Those Working	$7.07

FIGURE 29

The third quarter after they left JTPA, Title II-A, 45 percent of those in covered employment individually had sufficient quarterly earnings (if continued all year) to support a family of three above the poverty level. Six percent had earnings that might be characterized as "family-wage"—twice the poverty level for a family of three.

According to the survey responses, 31 percent of those employed had health benefits provided by their employer, and 16 percent had pension benefits.

Forty-six percent of the former JTPA, Title II-A participants reported receiving some form of public assistance during the past 12 months (either Aid to Families with Dependent Children (AFDC), Food Stamps, or the Women, Infants and Children Supplementary Food Program.) This is not surprising.

According to the Washington State Institute for Public Policy, there appears to be a threshold of about $8.00 per hour in wages that enables an AFDC recipient to achieve financial independence. Based upon wages reported for unemployment insurance purposes, more than half of the employed participants did not achieve this threshold.

Women were just as likely as men to have a job reported for unemployment insurance purposes, and women had as many hours of employment in the quarter. However, mean

[18] Battelle estimates that the unemployment insurance matched employment rate likely understates the total employment rate by no more than 11 percentage points.

wages for women were $.75 less per hour. Also, women were less likely than men to indicate in the survey that they had medical or pension benefits from their job. Blacks had about the same hourly wage rate as did whites, but were less likely to be employed, and if employed, had fewer hours of employment during the quarter. The earnings for blacks were therefore lower than for whites.

Net Impacts

Services funded under Job Training Partnership Act (JTPA), Title II-A, serving disadvantaged adults, had mixed impacts on the employment and earnings of program participants. The training was associated with a decline in the hourly wage of employment reported to Employment Security, but a positive impact on the number of hours of those in reported employment. In the long run, there was an increase in the percentage of individuals with reported employment but their earnings were lower than the comparison group's. *Both in the short and long run, the training was associated with large increases in the receipt of social welfare benefits.*

Figure 30 shows the short-term net impacts of services funded under JTPA, Title II-A. During the third quarter after the 1993–94 participants left the program, the training was associated with a decrease of $.39 in the hourly wage of those with employment reported to Employment Security. Among those with reported employment, the impact on hours worked in the quarter was a positive 10 hours. These are the net changes compared to similar individuals who did not participate in training during the time period of the study. There was no statistically significant impact on either the percent with reported employment or on quarterly earnings.

During the third postprogram quarter the training was associated with large increases in the percentage of participants receiving certain social welfare benefits. The training was associated with an increase of 5.5 percentage points in the percentage of individuals receiving regular AFDC benefits; an increase of 14.4 percentage points in the percentage receiving medical benefits; and an increase of 17.7 percentage points in the percentage receiving medical benefits. *These large net impacts suggest that the participants experienced something during the JTPA, Title II-A program that made them more likely to apply for social welfare benefits.*

Short-Term Net Impacts
Net Impacts During the Third Quarter (7 to 9 months) After Leaving JTPA, Title II-A

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	53.7%	1.5%**	55.2%**
Mean Hourly Wage: *of those working*	$8.41	- $.39	$8.02
Mean Hours Worked: *per quarter of those working*	346 hours	10 hours	356 hours
Mean Quarterly Earnings: *of those working*	$2,918	- $29**	$2,889**
AFDC: *percentage receiving regular aid*	7.6%	5.5%	13.1%
Food Stamps: *percentage receiving*	20.8%	14.4%	35.2%
Medical Benefits: *percentage receiving*	20.4%	17.7%	38.1%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*
*** Not a significant difference at the .10 level.*

FIGURE 30

Longer-Term Net Impacts
Net Impacts During the Thirteenth Quarter (3 years) After Leaving JTPA, Title II-A

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	45.2%	5.5%	50.7%
Mean Hourly Wage: *of those working*	$9.69	- $.66	$9.03
Mean Hours Worked: *per quarter of those working*	375 hours	15 hours	390 hours
Mean Quarterly Earnings: *of those working*	$3,736	- $168	$3,568
Unemployment Insurance: *percentage receiving*	7.4%	1.0%	8.4%
AFDC: *percentage receiving regular aid*	6.3%	4.0%	10.3%
Food Stamps: *percentage receiving*	16.3%	8.2%	24.5%
Medical Benefits: *percentage receiving*	17.5%	7.8%	25.3%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*

FIGURE 31

Benefits and Costs of JTPA, Title II-A for Adults

	FIRST 3.5 YEARS AFTER PROGRAM		*FORECAST TO AGE 65*	
	PARTICIPANT	PUBLIC	PARTICIPANT	PUBLIC
Earnings	$2,309		$3,379	
Employee Benefits	$330		$544	
Foregone Earnings	- $659		- $659	
UI Benefits	- $331	$331	$3,836	- $3,836
Welfare Benefits	$1,821	- $1,821	$3,049	- $3,049
Program Costs		- $2,264		- $2,264
Taxes	- $436	$600	- $710	$981
TOTAL	$3,034	- $3,154	$9,439	- $8,168

** Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.*

FIGURE 32

Figure 31 shows the longer-term net impacts of services funded under JTPA, Title II-A. These are the net impacts three years after participants left the program during the 1991–92 year. During the thirteenth postprogram quarter, the net impacts of the training on participant employment and earnings continued to be mixed.

The training was associated with a 5.5 percentage point increase in the percentage of individuals with employment reported in Employment Security files. Among those with reported employment, the training was associated with a decline of $.66 in hourly wages, and a decline of $168 in quarterly earnings. There was, however, an increase of 15 hours worked in the quarter among those with reported employment.

During the thirteenth quarter, the JTPA, Title II-A program was still associated with large increases in the receipt of social welfare benefits. The training was associated with 1.0 percentage points more individuals receiving unemployment insurance benefits, 4.0 percentage points more receiving AFDC, 8.2 percentage points more receiving food stamps, and 7.8 percentage points more receiving medical benefits.

Benefits and Costs

The cost-benefit analysis finds that during the first three-and-a-half years after leaving the program, JTPA, Title II-A participants experienced increased earnings and employee benefits, but these increases in participant benefits were less than the program costs to the public. The analysis forecasts that participant earnings and employee benefits to age 65 will exceed the costs of the program, but not total public costs.

For each additional participant in JTPA, Title II-A, the public, or taxpayer cost is $2,264 over the length of enrollment (Figure 32). There is

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no participant tuition or fee. During the first three-and-a-half years after leaving the program the average participant gained $1,650 in net earnings (earnings minus foregone earnings while in training), and $330 in employee benefits (such as health insurance and pension benefits). These are net gains compared to the earnings of similar individuals who did not receive training during the time period in the study (discounted at 3 percent and in 1995 fourth quarter dollars). During the course of a working life to age 65, the participants are forecasted to gain $2,720 in net earnings and $544 in employee benefits. The ratio of participant benefits to program costs is, therefore, without considering impacts on social welfare expenditures, $3.264 to $2.264.

The total public or taxpayer costs are higher than the program costs because the training was associated with increases in social welfare expenditures. During the first three-and-a-half years after JTPA, Title II-A, public expenditures on AFDC, food stamps, and medical benefits increased by $1,821, but public expenditures on unemployment insurance benefits decreased by $331. From the time of leaving training to age 65, the public is forecasted to expend $3,049 more in welfare costs, and unemployment insurance payments are expected to increase by $3,836.

The estimated gain in tax revenue is less than the social welfare or program costs. During the first three-and-a-half years after the program, the public gained an estimated $600 in additional unemployment insurance, social security, medicare, income, and sales taxes. During the entire postprogram period to age 65, the gain in tax revenues is forecasted to be $981 per participant.

Demand for Additional Training

Based upon the survey, 70 percent of the former JTPA, Title II-A participants would like additional training. By far, the skills they were most interested in improving were computer skills (48 percent of those wanting additional training). Twenty-two percent indicated they wanted additional training in skills to do a specific job or occupation.

When asked about the mix of classroom and on-the-job training that they had received from either a program or an employer, 50 percent indicated that they had received the right mix, 27 percent responded that they had too much classroom and too little on-the-job training, and eight percent indicated that they had too much on-the-job and not enough classroom training.

Areas for Possible Improvement

JTPA, Title II-A serves adults who are disadvantaged, and on the average, provides service for only about six months. The third quarter after leaving JTPA, Title II-A, less than half of the employed participants had individual hourly earnings that would typically enable an AFDC recipient to achieve financial independence. Moreover, participant net gains in earnings and employee benefits were less than the costs to the taxpayers. While *most participants were satisfied with the program, the evaluation results suggest that substantial changes should be made in the program. Many participants could have used more services than the program provided, and perhaps for a longer period of time.*

Services that a substantial percentage of participants needed more of included: basic skills instruction, computer skills training, training in specific occupational skills, career counseling, job placement assistance, and information about other government programs. Career counseling, occupational training, and job placement assistance might do more to target occupations and industries that pay a higher wage. Men were generally less satisfied than were women that they received the services they needed.

Job Training Partnership Act, Title II-C for Youth

The Job Training Partnership Act (JTPA), Title II-C program serves low income youth from 16 to 21 years of age who have barriers to success in school or employment.[19] Evidence of barriers include low levels of literacy, dropping out of school, a criminal record, and receipt of Aid to Families with Dependent Children. When *considering the outcomes of JTPA ,Title II-C, it is important to remember the program serves only the disadvantaged.*

JTPA, Title II-C provides a variety of training and employment-related services including occupational training, basic skills instruction, and job search assistance such as career counseling, resume preparation, and job referrals. JTPA, Title II-C is administered at the state level by the Employment Security Department. At the local level, administration is through 12 Service Delivery Areas, each headed by a Private Industry Council (PIC) in partnership with local elected officials. PICs may either provide services directly or purchase services from another provider.

For the study, participant records were obtained on 3,521 youth who left the program during the 1993 program year (July 1, 1993, to June 30, 1994). Their length of participation ranged from a single incident of service to the full range of service offered by the program. On the average, the participants were in the program for about seven months. Employment-related information was obtained from a match with the unemployment insurance wage files for those participants with employment reported for unemployment insurance purposes (85 to 90 percent of in-state employment). In addition, 233 former participants responded to the survey conducted during the summer and fall of 1995.

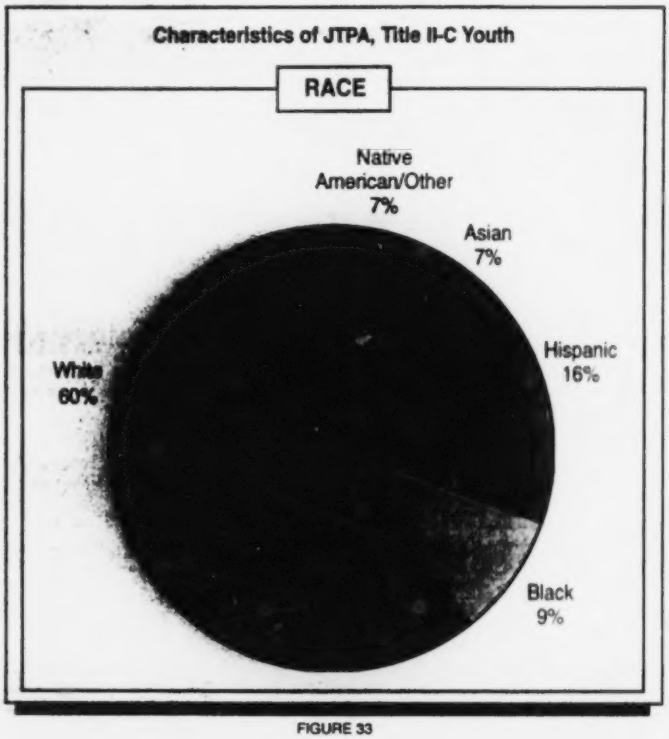

FIGURE 33

Participant Characteristics

Participants in JTPA, Title II-C are much more diverse, less educated, poorer, and obviously younger than the state general population. Forty percent of the participants during 1993-94 were people of color, compared to 15 percent of the state population. Sixteen percent were Hispanic, nine percent were African-Americans, and seven percent were Asian. Forty-two percent were located in Eastern Washington. Fifty-five percent were female. Eighty-four percent did not have a high school degree or GED when they entered the program. (See Figure 33.)

[19] Service Delivery Areas may choose to serve 14- and 15-year-olds. About 5 percent of the state's participants are 14 or 15 years old.

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Not surprisingly, given their youth, JTPA, Title II-C participants were the least well-off program participants included in this study. Among those participants with employment reported for unemployment insurance purposes during the third quarter prior to enrollment, 91 percent earned less than $1,000 during the quarter and nine percent earned between $1,000 and $5,000.

Competencies

Based on the survey results, 37 percent of the participants entered the program primarily to get some type of skill training, either occupational (27 percent) or basic skills (10 percent). The plurality of the participants (45 percent) entered JTPA, Title II-C for the primary purpose of getting a job.

Fifty-nine percent of the participants reported they received skill training for a specific job, and of these, 62 percent felt the training significantly improved their skills, and most of the remainder said that their skills improved somewhat. (See Figure 34.) Of the total program participants, 37 percent felt that the program significantly improved their occupational skills for specific jobs. *Forty-six percent of the participants reported receiving instruction in reading/writing*, and of these, 39 percent believed that the instruction significantly improved their basic skills. Based on the survey results, only 18 percent of the total participants felt that their basic skills significantly improved as a result of the program.

Examining other types of skills, the former participants most frequently mentioned receiving training in teamwork (77 percent) and work habits (76 percent). Among those who received the training, the majority (about 55 percent) felt that these skills were significantly improved. Fifty-five percent reported receiving instruction in critical thinking and *41 percent indicated they were trained in using computers*. Among those who received such instruction, 45 percent felt their critical thinking skills were significantly improved and 39 percent felt that their computer skills were significantly improved. According to the survey results, only 16 percent of the total participants felt that their computer skills were significantly improved by the program.

Among those employed after the program, 69 percent reported they used one or more of the skills obtained from the training on their job, and among those, 81 percent indicated that the skill(s) was very useful in performing their job.

A substantial percentage of the participants were continuing their education the following academic year. Based on computer matches,

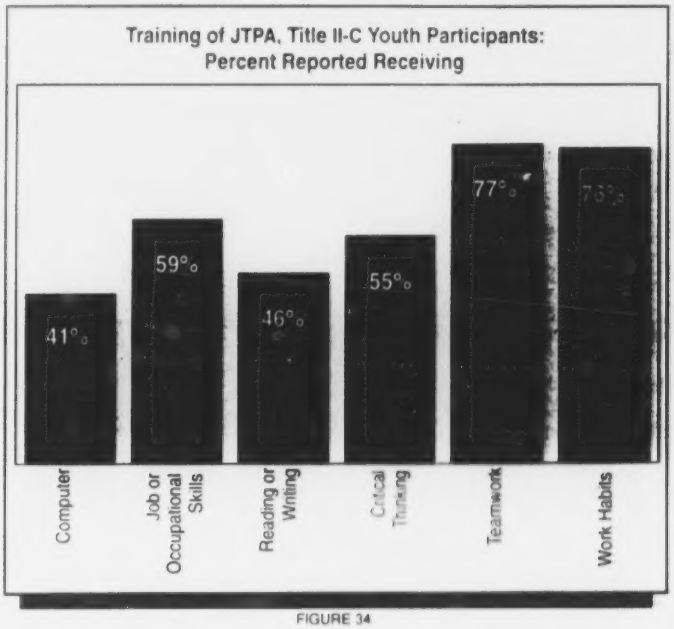

FIGURE 34

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16 percent were enrolled in a community or technical college program during the year after they were in JTPA, Title II-C.[20]

Participant Satisfaction

The survey results reveal that the participants were quite satisfied with their JTPA, Title II-C program, both with the training and with the related support services.

Sixty-two percent indicated that the program definitely met their objectives, and only eight percent said the program met their objectives "not at all." Thirty-five percent were very satisfied with the overall quality of the program and 64 percent were satisfied, compared to only 9 percent who were dissatisfied. Forty-five percent were very satisfied with the quality of teaching, and only 8 percent were dissatisfied. Forty-one percent were very satisfied with the degree to which the training provided them with practical skills that employers want, and only 15 percent were dissatisfied. The only aspect of the training itself for which participant satisfaction was not high was the length of the program. Twenty-four percent of the participants were very satisfied with the length of program, but 18 percent were dissatisfied.

As stated in the beginning description of the program, many of the services provided by JTPA, Title II-C are not occupational or basic skills training, but employment-related services such as job search assistance. Based on the survey results, most of the participants who needed employment services and other support services did indeed receive such service, and in most cases their need was met.

The services most frequently needed by the participants were: assistance with resume writing and job interviewing (needed by 71 percent of the participants), job placement assistance (needed by 61 percent), and career counseling (46 percent). In each case, over three-quarters of the participants needing the service reported receiving it, and close to 70 percent or more who received the service were satisfied that it met their need. Within this high range, the numbers were somewhat lower for job placement assistance. Nineteen percent of the total participants reported leaving the program without meeting their need for job placement assistance. (See Figure 35.)

There was only one type of service that left about half of those in need feeling dissatisfied—help in obtaining information about other government programs. Among the 31 percent of participants who reported they needed the service, only 46 percent left the program with their need met.

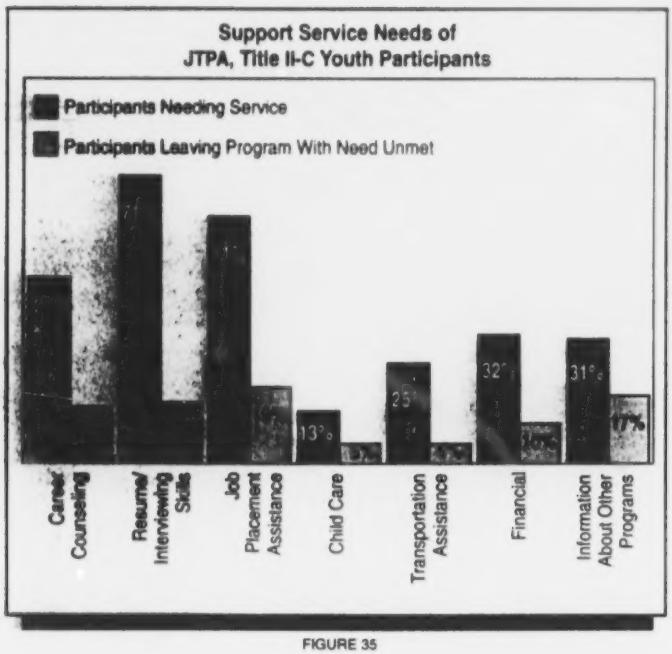

FIGURE 35

[20] It is not known how many were enrolled in other types of educational institutions.

Overall, females were generally more satisfied with the training than were males but were less satisfied with the related support services. They were more likely to report receiving skills training and to be satisfied with the training. But, females reported higher levels of needs for most support services and a greater likelihood that their needs were unmet.

Employer Satisfaction

It was not feasible to separately ask employers about each of the three JTPA programs included in the study (JTPA, Titles II-A, II-C, and III). Employers were instead simply asked about workers who had been trained "by JTPA." The results are presented in the employer satisfaction section for JTPA, Title II-A.

Employment and Earnings

According to the survey responses, 60 percent of the 1993-94 JTPA, Title II-C participants were employed at the time of the survey in the summer or fall of 1995. (See Figure 36.) The majority reported being employed in either clerical or sales positions (30 percent) or service jobs (29 percent). Fifteen percent reported being employed in manufacturing occupations and eight percent indicated they were in the health care industry.

Forty-seven percent of the JTPA, Title II-C participants were found to have employment reported for unemployment insurance purposes during the third quarter after they left the program. (The unemployment insurance wage file includes 85 to 90 percent of the employment in Washington and does not include out-of-state employment).[21] Only 15 percent were in covered employment at least 37 hours per week on the average during the third quarter. *The mean wage of those in covered employment was $6.48 per hour with $1,687 in quarterly earnings on the average. The median wage was $5.72 per hour with $1,313 in quarterly earnings. In considering these wage levels, it is important to consider that these are young, entry-level workers, and such workers are typically paid low wages.* (See Figure 37.)

Employment of 1993–94 JTPA, Title II-C Youth Participants	
Percent With Employment Reported for Unemployment Insurance Purposes the Third Quarter After Leaving Program	47%
Percent Self-Reporting Employment When Surveyed During the Summer of 1995	60%

FIGURE 36

Employment and Earnings Reported for Unemployment Insurance Purposes of JTPA, Title II-C Youth in the Third Quarter After Leaving Program	
Mean Quarterly Hours of Work of Those Working	254
Percent Employed an Average of 37 Hours Per Work Week of Those Working	15%
Mean Quarterly Earnings of Those Working	$1,687
Median Quarterly Earnings of Those Working	$1,313
Percent With Individual Earnings Above 100% Poverty Level ($2,984/quarter) of Those Working	18%
Percent With Individual Earnings Above 200% Poverty Level ($5,968/quarter) of Those Working	1%
Mean Hourly Wage of Those Working	$6.48
Median Hourly Wage of Those Working	$5.72

FIGURE 37

[21] Battelle estimates that the unemployment insurance matched employment rate likely understates the total employment rate by no more than eight percentage points.

The third quarter after they left JTPA, Title II-C, only 18 percent of those in covered employment individually had sufficient quarterly earnings (if continued all year) to support a family of three above the poverty level. Only one percent had earnings that might be characterized as "family-wage"—twice the poverty level for a family of three.

According to the survey responses, 29 percent of those employed had health benefits provided by their employer, and 17 percent had pension benefits. Thirty-six percent reported receiving some form of public assistance during the past 12 months (either Aid to Families with Dependent Children (AFDC), Food Stamps, or the Women, Infants and Children Supplementary Food Program).

One of the goals of the program is for the participants to continue their education. As we have seen, 16 percent of the participants enrolled in a community or technical college program the school year following JTPA, Title II-C. In all, 55 percent of the participants either had a job reported for unemployment insurance purposes or were enrolled in a two-year college.

There were few substantial differences in the employment and earnings outcomes by gender or race. Females and blacks were somewhat less likely to have employment reported for unemployment insurance purposes, but they were more likely to be enrolled in a community or technical college during the academic year after they left their JTPA, Title II-C program.

Net Impacts

Services funded under the Job Training Partnership Act (JTPA), Title II-C serving disadvantaged youth, were associated with short-term positive net impacts on employment and earnings, although these impacts diminished over time. The program was also associated with large increases, especially in the short term, in the receipt of social welfare benefits.

Figure 38 shows the short-term net impacts of services funded under JTPA, Title II-C. During the third quarter after the 1993–94 participants left the program, the training was associated with positive net impacts on employment and earnings. There was a positive net impact of 5.0 percentage points in the percentage of individuals with employment reported to Employment Security. Among those with reported employment, wages increased by $.27 per hours; the impact on hours worked in the quarter was a positive 27 hours; and the

Short-Term Net Impacts
Net Impacts During the Third Quarter (7 to 9 months) After Leaving JTPA, Title II-C

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	43.1%	5.0%	48.1%
Mean Hourly Wage: *of those working*	$6.33	$.27	$6.60
Mean Hours Worked: *per quarter of those working*	243 hours	27 hours	270 hours
Mean Quarterly Earnings: *of those working*	$1,580	$237	$1,817
AFDC: *percentage receiving regular aid*	10.9%	5.7%	16.6%
Food Stamps: *percentage receiving*	21.9%	12.4%	34.3%
Medical Benefits: *percentage receiving*	28.0%	11.3%	39.3%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*

FIGURE 38

impact on quarterly earnings was $237. These were the net changes compared to similar individuals who did not participate in training during the time period of the study.

During the third postprogram quarter the training was associated with large increases in the percentage of participants receiving certain social welfare benefits. The training was associated with an increase of 5.7 percentage points in the percentage of individuals receiving regular AFDC benefits; an increase of 12.4 percentage points in the percentage receiving medical benefits; and an increase of 11.3 percentage points in the percentage receiving medical benefits. These *large net impacts, especially given the labor market gains, suggest that the participants experienced something during the JTPA, Title II-C program that made them more likely to apply for social welfare benefits.*

Figure 39 shows the longer-term net impacts of services funded under JTPA, Title II-C. These are the net impacts three years after participants left the program during the 1991–92 year. By the thirteenth postprogram quarter, the net impacts of the program on participant employment and earnings had declined and most had become statistically insignificant.

The training was associated with a 3.6 percentage point increase in the percentage of individuals with employment reported in Employment Security files. Among those with reported employment, however, the training was associated with no statistically significant difference (at the .10 level) in hourly wages, hours of work, or quarterly earnings.

During the thirteenth quarter, the JTPA, Title II-C program was still associated with large increases in the receipt of social welfare benefits. The program was associated with 1.3 percentage points in more individuals receiving unemployment insurance benefits, 5.1 percentage points more receiving AFDC, 8.1 percentage points more receiving food stamps, and 6.3 percentage points more receiving medical benefits.

Benefits and Costs

During the first three-and-a-half years after leaving the program, JTPA, Title II-C participants experienced increased earnings and employee benefits that exceeded the program costs to the public, but not the total public costs when increased social welfare costs are included. The analysis forecasts that

Longer-Term Net Impacts
Net Impacts During the Thirteenth Quarter (3 years) After Leaving JTPA, Title II-C

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	47.9%	3.6%	51.5%
Mean Hourly Wage: *of those working*	$7.32	- $.02**	$7.30**
Mean Hours Worked: *per quarter of those working*	322 hours	9 hours**	331 hours**
Mean Quarterly Earnings: *of those working*	$2,421	$69**	$2,490**
Unemployment Insurance: *percentage receiving*	3.7%	1.3%	5.0%
AFDC: *percentage receiving regular aid*	8.1%	5.1%	13.2%
Food Stamps: *percentage receiving*	17.5%	8.1%	25.6%
Medical Benefits: *percentage receiving*	20.4%	6.3%	26.7%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*
*** Not a significant difference at the .10 level.*

FIGURE 39

participant increased earnings and employee benefits to age 65 will exceed both the costs of the program and total public costs. The net gains in participant earnings and benefits will exceed program costs by a ratio of eight to one. This forecasted success is tempered by expected increases in social welfare costs (under the unlikely assumption that there will be no change in state welfare programs).

For each additional participant in JTPA, Title II-C, the public, or taxpayer cost is $2,389 over the length of enrollment (Figure 40). There is no participant tuition or fee. During the first three-and-a-half years after leaving the program the average participant gained $2,300 in net earnings (earnings minus foregone earnings while in training), and $460 in employee benefits (such as health insurance and pension benefits). These are net gains compared to the earnings of similar individuals who did not receive training during the time period in the study (discounted at 3 percent and in 1995 fourth quarter dollars). During the course of working life to age 65, the participants are forecasted to gain $16,089 in net earnings and $3,218 in employee benefits. (The working life gains are much larger than the gains during the first three-and-a-half years largely because of the participants are 16 to 21 years of age.) The ratio of participant benefits to program costs is, without considering impacts on social welfare expenditures or taxes, $19,307 to $2,389, or eight to one.

The total public, or taxpayer, costs is higher than the program costs because the program was associated with large increases in state social welfare expenditures. During the first three-and-a-half years after JTPA, Title II-C, public expenditures on AFDC, food stamps, and medical benefits increased by $1,852, and public expenditures on unemployment insurance benefits increased by $77. From the time of leaving training to age 65, the public is forecasted to expend $8,585 more in welfare costs, and unemployment insurance payments are expected to increase by $846.

In contrast to the impact on social welfare expenditures, the impact of the program on tax revenues is to lower the total costs to the public. During the first three-and-a-half years after the program, the public gained an estimated $500 in additional unemployment insurance, social security, medicare, income, and sales taxes generated from the increased earnings. During the entire postprogram period to age 65, the gain in tax revenues is forecasted to average $5,546 per participant. This long-run impact on taxes is greater than the direct costs of the program.

Benefits and Costs of JTPA, Title II-C for Youth

	FIRST 3.5 YEARS AFTER PROGRAM		*FORECAST TO AGE 65*	
	PARTICIPANT	PUBLIC	PARTICIPANT	PUBLIC
Earnings	$2,416		$16,205	
Employee Benefits	$460		$3,218	
Foregone Earnings	- $116		- $116	
UI Benefits	$77	- $77	$846	- $846
Welfare Benefits	$1,852	- $1,852	$8,585	- $8,585
Program Costs		- $2,389		- $2,389
Taxes	- $271	$500	- $3,945	$5,546
TOTAL	$1,418	- $3,818	$24,793	- $6,274

** Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.*

FIGURE 40

Demand for Additional Training

Based upon the survey, 68 percent of the former JTPA, Title II-C participants would like additional training. The type of skills they were most interested in improving were skills to do a specific job or occupation (34 percent of those wanting additional training) and computer skills (32 percent).

Areas for Possible Improvement

JTPA, Title II-C serves youth who are disadvantaged and provides services for only about seven months on average. A large majority of the participants reported they were quite satisfied with the program, and participant earnings to age 65 are expected to be greater than the public costs. Yet, six to nine months after being in JTPA, Title II-C, half of those working in employment reported for unemployment insurance purposes earned less than $5.72 per hour, and the program was associated with large increases in social welfare payments in both the short and longer terms.

While most of the participants were satisfied with the services they received, the evaluation results suggest that a substantial percentage could have used more instruction than the program provided, and perhaps for a longer period of time. Eighty-four percent of the participants entered the program without a high school degree or GED, yet only 46 percent of the participants reported receiving instruction in reading/writing and only 39 percent of those who received such instruction believed that it significantly improved these basic skills. The survey responses also suggest that the participants could have used more training in computers and in specific occupational skills, especially for occupations that pay wages that enable financial independence.

Generally, support services were rated highly. Support services that could use some improvement are help in obtaining information about other government programs and assistance with job placement. Female participants have the greatest need for improvements in support services.

Job Training Partnership Act, Title III for Dislocated Workers

Job Training Partnership Act (JTPA), Title III serves a more specific population than do the other training programs included in this study. JTPA, Title III is limited to what are commonly referred to as "dislocated workers." To be eligible, individuals must be unemployed and have limited opportunities for employment or reemployment. Individuals are eligible if they have been terminated (or have received a notice of termination of employment) due to a permanent closure or substantial layoff at a plant or facility and are eligible for unemployment compensation (or have exhausted their benefits) and are unlikely to return to their previous occupation or industry.

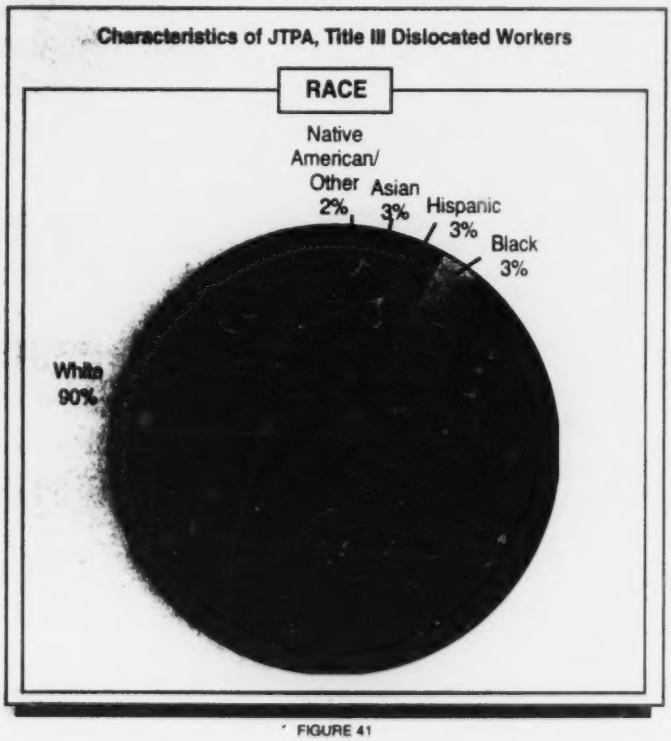

FIGURE 41

As with JTPA, Titles II-A and II-C; JTPA, Title III provides a variety of training and employment-related services including occupational training, basic skills instruction, and job search assistance such as career counseling, resume preparation, and job referrals. The program is administered at the state level by the Employment Security Department. At the local level, administration is through 12 Service Delivery Areas, each headed by a Private Industry Council (PIC) in partnership with local elected officials. PICs may either provide services directly or purchase services from other providers. Occupational training may occur at either a training institution such as a community or technical college, or private vocational school, or at a work site.

For the study, participant records were obtained on 2,872 individuals who left the program during the 1993 program year (July 1, 1993, to June 30, 1994). Their participation ranged from any incident of service to the full range of service offered by the program. On the average, the participants were in the program for about 10 months. Employment-related information was obtained from a match with the unemployment insurance wage files for those participants with employment reported for unemployment insurance purposes (85 to 90 percent of in-state employment). In addition, 320 former participants responded to the telephone survey conducted during the summer and fall of 1995.

Participant Characteristics

Participants in JTPA, Title III are a relatively homogenous group due to the program's eligibility requirements and the makeup of the state's population. Typically, they are white males who are used to having a family-wage job. Ninety percent are white (compared to 85 percent of the state population). (See Figure 41.) Sixty-eight percent are men. Ninety-three percent were age 25 or older. About 14 percent

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did not have a high school degree or GED when they entered the program (similar to the 17 percent of all adults in the state 18 years of age or older who do not have a high school degree or GED).

Prior to losing their job, JTPA, Title III participants were the most well-off program participants included in this study. Among those participants with employment reported for unemployment insurance purposes during the third quarter prior to enrollment, 27 percent earned less than $1,000 during the quarter, 20 percent earned between $1,000 and $5,000, and 53 percent earned more than $5,000.

Competencies

Based on the survey results, thirty-five percent of the participants entered the program for the main reason of getting some type of skill training, either occupational or basic skills. The majority of the participants (55 percent) entered JTPA, Title III for the primary purpose of getting a job.

Sixty-five percent of the participants received skill training for a specific job, and of those, 73 percent reported that the training significantly improved their skills. (See Figure 42.) Fifty-nine percent received training in computers, and of those, 54 percent felt that the training significantly improved their computer skills, compared to only 7 percent who thought their skills improved not at all (the remainder felt their skills improved somewhat). About half of the participants reported receiving instruction in basic skills—50 percent in math and 45 percent in reading/writing. About 40 percent of those receiving basic skills instruction thought the instruction significantly improved their skills, and only 6 to 9 percent felt their basic skills improved "not at all."

Among those employed after the program, 68 percent reported they used one or more of the skills obtained from the training on their job, and among those, 78 percent indicated that the skill(s) was very useful in performing their job.

The year following their JTPA, Title III participation, 11 percent of the participants were continuing their learning in a community or technical college program.

Participant Satisfaction

The survey results indicate that the participants were mostly satisfied with the program, except for certain support services.

Fifty-four percent of the participants felt the program definitely met their objectives, compared to only 13 percent who were dissatisfied. Fifty-six percent were very

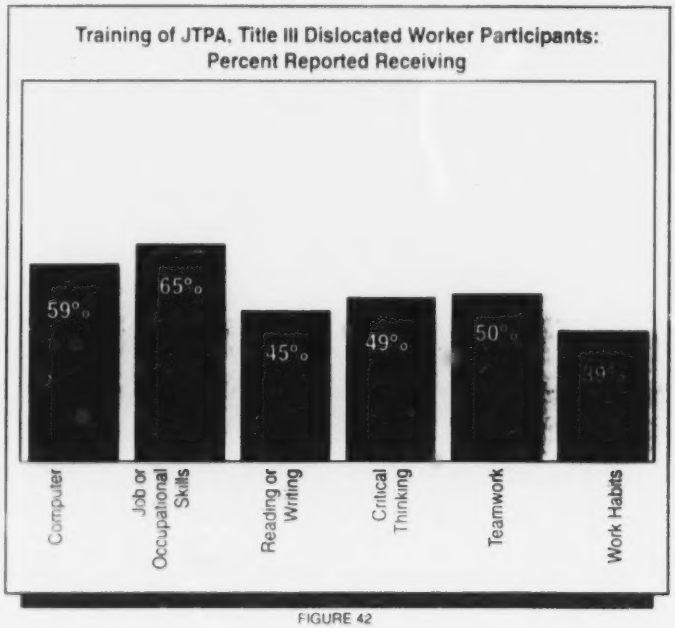

FIGURE 42

satisfied with the quality of the teaching and 35 percent were satisfied, compared to 9 percent who were dissatisfied. Forty-four percent were very satisfied with the overall quality of the program and 46 percent were satisfied, compared to 10 percent who were dissatisfied. As with other JTPA programs, there was some dissatisfaction with the length of the program. While 25 percent of the participants were very satisfied with the program's length, 19 percent were dissatisfied.

The support services most frequently needed by the participants were: financial assistance (needed by 57 percent), assistance with resume writing and job interviewing (49 percent), job placement assistance (47 percent), career counseling (45 percent), and information about other government programs (needed by 37 percent of the participants). (See Figure 26.) For resume writing and job interviewing, career counseling, and financial assistance, over 80 percent of those needing help were served, and the large majority were satisfied that their needs were met.

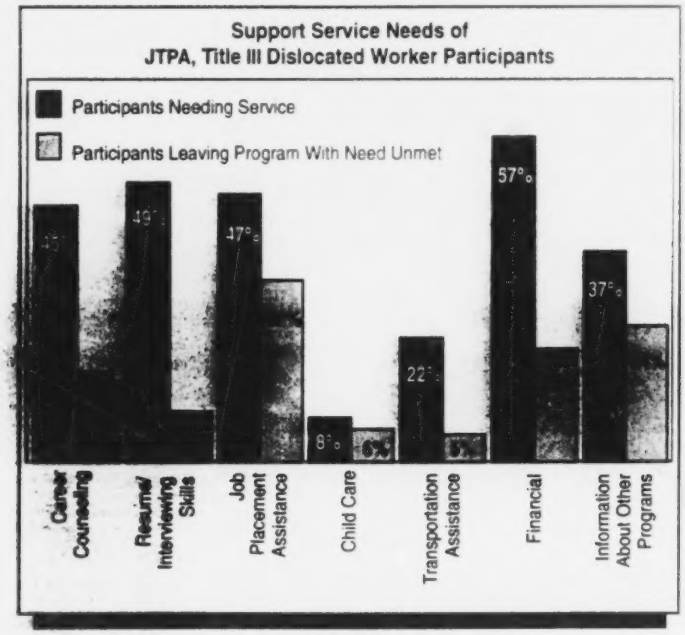

FIGURE 43

A substantial percentage of the total participants, however, reported they left the program with their need for support services unmet. Thirty-two percent left with their need for job placement assistance unmet, 24 percent left with their need for information about other programs unmet, 20 percent left with their need for financial assistance unmet, and 16 percent left with their need for career counseling unmet. ***In three cases—job placement assistance, information about other programs, and child care—less than half of those needing assistance reported they left the program with their need met.*** In each case, only 25 to 30 percent of those needing the service left the program with their need met.

Employer Satisfaction

It was not feasible to separately ask employers about each of the three JTPA programs included in the study (JTPA, Titles II-A, II-C, and III). Employers were instead simply asked about workers who had been trained "by JTPA." The results are presented in the employer satisfaction section for JTPA, Title II-A.

Employment of 1993–94
JTPA, Title III Dislocated Workers

Percent With Employment Reported for Unemployment Insurance Purposes the Third Quarter After Leaving Program	70%
Percent Self-Reporting Employment When Surveyed During the Summer of 1995	84%

FIGURE 44

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Employment and Earnings

According to the survey responses, 84 percent of the 1993-94 JTPA, Title III participants were employed at the time of the survey in the summer or fall of 1995. (See Figure 44.) The plurality (29 percent) reported they were employed in manufacturing occupations. Twenty-two percent reported employment in clerical or sales positions, and 7 percent were in service jobs. Seven percent of the participants were employed in the health care industry.

Seventy percent of the JTPA, Title III participants were found to have employment reported for unemployment insurance purposes during the third quarter after they left the program. (The unemployment insurance wage file includes 85 to 90 percent of the employment in Washington and does not include out-of-state employment).[22] Seventy-four percent were either in reported employment in the third quarter or enrolled in a community or technical college program during the 1994-95 school year. Fifty-two percent were working in covered employment at least 37 hours per week on the average during the third quarter. *The mean wage of those in covered employment was $12.15 per hour, with $5,420 in quarterly earnings on average. The median wage was $11.15 per hour, with median quarterly earnings of $5,060.* (See Figure 45.)

The third quarter after they left JTPA, Title III, 78 percent of those in covered employment had sufficient individual quarterly earnings (if continued all year) to support a family of three above the poverty level. Thirty-eight percent had earnings that might be characterized as "family-wage"—twice the poverty level for a family of three.

According to the survey responses, 66 percent of those employed had health benefits provided by their employer, and 47 percent had pension benefits. Only 8 percent reported receiving some form of public assistance during the past 12 months (either Aid to Families with Dependent Children, Food Stamps, or the Women, Infants and Children Supplementary Food Program).

The results suggest that generally the participants had fairly positive employment and earnings outcomes, although not at the same level some had earned before being dislocated.

[22] Battelle estimates that the unemployment insurance matched employment rate likely understates the total employment rate by not more than 13 percentage points.

Employment and Earnings Reported for Unemployment Insurance Purposes of JTPA, Title III Dislocated Workers in the Third Quarter After Leaving Program	
Mean Quarterly Hours of Work of Those Working	439
Percent Employed an Average of 37 Hours Per Work Week of Those Working	52%
Mean Quarterly Earnings of Those Working	$5,420
Median Quarterly Earnings of Those Working	$5,060
Percent With Individual Earnings Above 100% Poverty Level ($2,984/quarter) of Those Working	78%
Percent With Individual Earnings Above 200% Poverty Level ($5,968/quarter) of Those Working	38%
Mean Hourly Wage of Those Working	$12.15
Median Hourly Wage of Those Working	$11.15

FIGURE 45

Net Impacts

Services funded under JTPA, Title III for dislocated workers had a positive net impact on most measures of employment and earnings compared to similar individuals who did not participate in training. The impacts diminish somewhat over time, but were still positive three years after participants had left the program.

Figure 46 shows the short-term net impacts of services funded under JTPA, Title III. During the third quarter after the 1993–94 participants left the program, the program was associated with a large increase of 8.5 percentage points in employment reported to Employment Security. Among those with reported employment, the impact on wage rates was statistically insignificant; the impact on hours worked in the quarter was 35 hours; and the impact on mean quarterly earnings was $398.

During the third postprogram quarter, the program was associated with small declines in the percentage of participants receiving certain social welfare benefits. The program was associated with a decrease of .7 percentage points in the percentage of individuals receiving regular AFDC benefits, and a decrease of 1.1 percentage points in the percentage receiving food stamps.

Short-Term Net Impacts
Net Impacts During the Third Quarter (7 to 9 months) After Leaving JTPA, Title III

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	60.9%	8.5%	69.4%
Mean Hourly Wage: *of those working*	$11.90	$.13**	$12.03**
Mean Hours Worked: *per quarter of those working*	397 hours	35 hours	432 hours
Mean Quarterly Earnings: *of those working*	$4,851	$398	$5,249
AFDC: *percentage receiving regular aid*	1.8%	- .7%	1.1%
Food Stamps: *percentage receiving*	7.5%	- 1.1%	6.4%
Medical Benefits: *percentage receiving*	5.5%	- .5%**	5.0%**

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*
*** Not a significant difference at the .10 level.*

FIGURE 46

Figure 47 shows the net impacts three years after participants left the program during the 1991–92 year. During the thirteenth postprogram quarter, the net impacts of the program on participant employment and earnings continued to be positive although less positive than the short-term results.

In considering the long-term results, it should be noted that there may have been program changes since 1991–92 that may have improved participant results. As mentioned in the introduction, a comparison of the short-term results for two participant cohorts shows that the short-term results for the 1993–94 JTPA, Title III participants appear to have been substantially better than for the 1991–92 participants. If the longer-term analysis was based on data for the more recent year, the results might be stronger than those reported here. Two major changes that occurred since 1991–1992 were Timber Retraining Benefits (TRB) and the ESHB 1988 dislocated worker retraining program. Title III participants were eligible to take part in Title III and TRB and ESHB 1988. It may be that the advent of TRB and ESHB 1988 led to the more positive results for Title III participants. This hypothesis, however, has not been tested.

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During the thirteenth postprogram quarter, JTPA, Title III was associated with a 6.3 percentage point increase in the percentage of individuals with employment reported to Employment Security. Among those with reported employment, the program was associated with a positive difference of 32 hours worked in the quarter. There was no significant difference in hourly wage rates or quarterly earnings. There was also no statistically significant difference in the percentage of individuals receiving social welfare or unemployment insurance benefits. Again, these are the differences in employment, earnings, and benefits compared to similar individuals who did not participate in one of the training programs included in the study.

Benefits and Costs

During the first three-and-a-half years after leaving JTPA, Title III, participant net gains in earnings and employee benefits were less than the program costs to the public. This shortfall was largely due to the loss of foregone earnings while participants were in the program. The forecast, however, estimates that participant net gains in earnings and employee benefits to age 65 will outweigh public program costs by a ratio of about $8 in participant benefits per public dollar invested in the program. Also, as discussed in the last section, the cost-benefit analysis does not include any recent benefits from program changes.

For each additional participant in JTPA, Title III, the public, or taxpayer cost is $3,064 over the length of participation. There is no participant tuition or fee. During the first three-and-a-half years after leaving the program the average participant will gain $1,331 in net earnings (earnings minus foregone earnings while in training) and $266 in employee benefits (such as health insurance and pension benefits). During the course of working life to age 65, the average participant will gain $19,361 in net earnings and $3,872 in employee benefits. These are net gains compared to the earnings of similar individuals who did not receive training. The ratio of participant benefits to program costs is, without considering impacts on social welfare expenditures or taxes, $23,233 to $3,064, or eight to one.

In addition to increased earnings, the program is associated with reduced social welfare expenditures and increased tax revenues. During the first three-and-a-half years after

Longer-Term Net Impacts
Net Impacts During the Thirteenth Quarter (3 years) After Leaving JTPA, Title III

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	56.7%	6.3%	63.0%
Mean Hourly Wage: *of those working*	$12.84	- $.20**	$12.64**
Mean Hours Worked: *per quarter of those working*	417 hours	32 hours	449 hours
Mean Quarterly Earnings: *of those working*	$5,502	$158**	$5,660**
Unemployment Insurance: *percentage receiving*	9.7%	- .4%**	9.3%**
AFDC: *percentage receiving regular aid*	1.0%	.0%**	1.0%**
Food Stamps: *percentage receiving*	6.7%	- .7%	6.0%**
Medical Benefits: *percentage receiving*	5.0%	- 1.0%	4.0%**

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*
***Not significant at the .10 level.*

FIGURE 47

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training, the public saved $84 in reduced expenditures on AFDC, food stamps, and medical benefits and $56 on reduced unemployment insurance payments. From the time of leaving training to age 65, the public is forecasted to save $1,034 in welfare costs, and $809 in unemployment insurance payments.

During the first three-and-a-half years after the program, the public gained an estimated $481 in additional unemployment insurance, social security, medicare, income, and sales taxes generated from the increased earnings. During the entire postprogram period to age 65, the gain in revenues is forecasted to average $6,979 per participant. This long-run impact on taxes is greater than the direct costs of the program

Demand for Additional Training

The demand for additional training among the former JTPA, Title III participants is high. Based upon the survey, 69 percent of the former JTPA, Title III participants would like additional training. By far, the skills they were most interested in improving were computer skills (48 percent of those wanting additional training). Twenty-four percent indicated they wanted additional training in skills to do a specific job or occupation.

When asked about the mix of classroom and on-the-job training they had received from either a program or an employer, 67 percent indicated that they had received the right mix. 21 percent responded they had too much classroom and too little on-the-job training, and just three percent indicated they had too much on-the-job and not enough classroom training.

Areas for Possible Improvement

JTPA, Title III serves dislocated workers who in most cases lost a good paying job. As we have seen, six to nine months after leaving the program, most of the participants had what most would probably characterize as good wages, although for some, not up to the level they once had. Furthermore, *the program is estimated to produce lifetime net benefits to participants that exceed public costs. Most of the participants were satisfied with their program, especially the training. The main areas for improvement are certain support services.*

In particular, the survey responses suggest that the program could improve assistance with job placement. Other services that could be improved include help in obtaining information about other government programs, financial assistance, career counseling, and for the relatively small number who reported needing such assistance—child care.

Benefits and Costs of JTPA, Title III for Dislocated Workers

	FIRST 3.5 YEARS AFTER PROGRAM		*FORECAST TO AGE 65*	
	PARTICIPANT	PUBLIC	PARTICIPANT	PUBLIC
Earnings	$4,739		$22,769	
Employee Benefits	$266		$3,872	
Foregone Earnings	- $3,408		- $3,408	
UI Benefits	- $56	$56	- $809	$809
Welfare Benefits	- $84	$84	- $1,034	$1,034
Program Costs		- $3,064		- $3,064
Taxes	- $348	$481	- $5,053	$6,979
TOTAL	$1,109	- $2,443	$16,337	$5,758

** Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.*

FIGURE 48

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Secondary Vocational-Technical Education

Secondary vocational-technical education serves youth in comprehensive high schools in 236 school districts and in eight regional vocational skills centers. Students are trained in agriculture, family and consumer sciences, trade and industry, marketing, business, diversified occupations, community resources, technology, cosmetology, and health occupations. Vocational guidance and counseling supports the offerings in most districts. Approximately 85 percent of high school students take at least one vocational education class. About one-sixth of graduating seniors complete a vocational education sequence.[23] *This evaluation is limited to this segment of students who can be considered vocational education completers. This is different than the other program evaluations included in the study, which were not limited to completers only.*[24]

The Office of the Superintendent of Public Instruction does not maintain central unit records on students in K-12 education. Therefore, it was necessary to ask individual school districts to volunteer records of students who had completed a vocational education sequence. As a consequence, the study was unable to obtain a random sample of secondary vocational-technical students. *The results reported here represent vocational completers from 19 school districts and two skills centers, and may or may not reflect results applicable to all secondary vocational education completers in the state.* The 19 districts and two skills centers include approximately one-sixth of all the graduating seniors in the state.[25] The districts include a variety of urban, suburban, and rural areas around the state. It should also be noted that student records are not maintained in a standard manner across these school districts. There are differences in how districts define vocational completer and in what type of data they maintain.

The study obtained information on 4,404 students who completed secondary vocational-technical education during the 1993-94 school year. Demographic and course data were obtained from student records, and employment-related information was obtained from a match with unemployment insurance wage records. The study includes information on continuing education from matches for these students with two- and four-year college files. During the summer of 1996, 302 former students completed a telephone survey. In addition, the study includes information on employer satisfaction from the employer survey. That information is based on employer perception of all new employees who recently completed secondary vocational education, not just students from the 19 districts and two skills centers that submitted student records.

[23] "High Skills, High Wages: Washington's Comprehensive Plan for Workforce Training and Education," Workforce Training and Education Coordinating Board, 1994.

[24] Besides completers, there is no other available demarcation of vocational education students that separates out college preparatory or general education students who took only a couple of vocational education classes.

[25] Estimate of the Puget Sound Educational Service District.

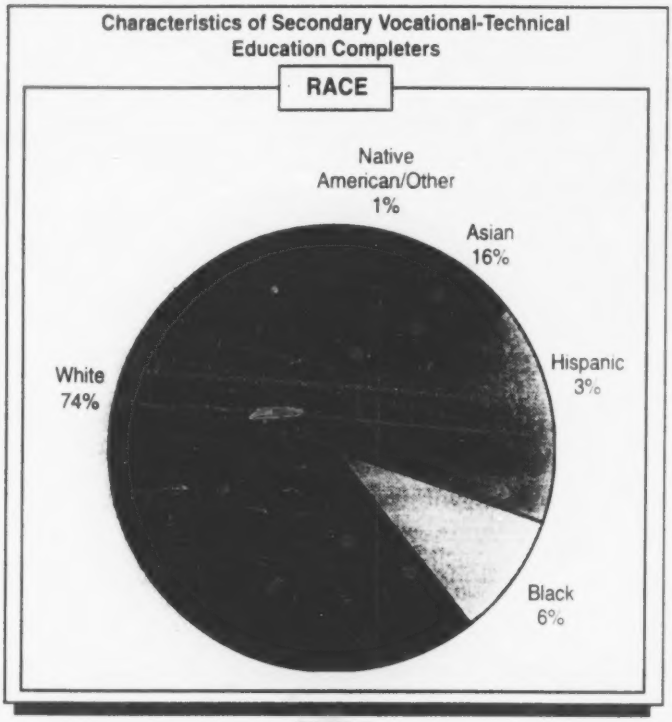

FIGURE 49

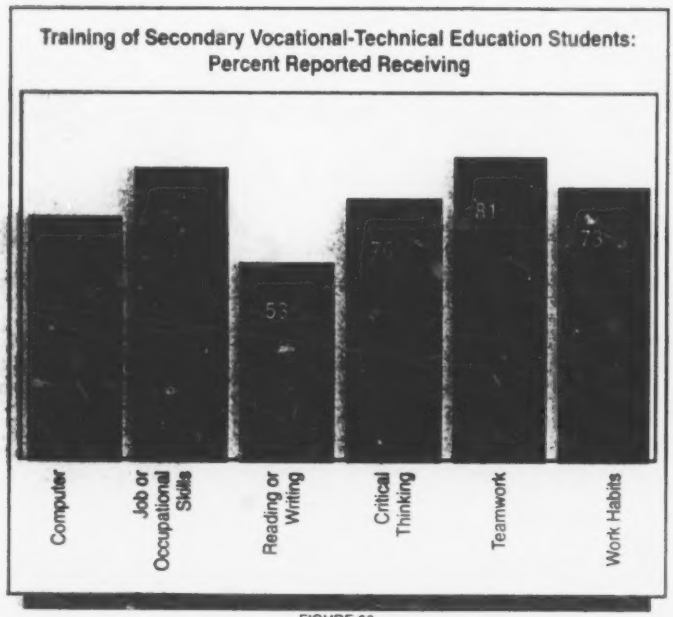

FIGURE 50

Participant Characteristics

The students included in the study are somewhat more diverse than the state general population, but reflect the racial makeup of the state's public schools. Seventy-four percent of the students in the study are white, compared to 79 percent of public school students. A substantial percentage of the students in the study are Asian or Pacific Islander—16 percent. Fifty-four percent of the students are females. (See Figure 49.)

Many of the students had employment during their last year of high school. Based on the survey results, 75 percent of the students worked at some point during the July 1993–June 1994 period. The average duration on the job was nine months. Among those working, 78 percent were in either clerical, sales, or service occupations. Twelve percent were employed in manufacturing, high technology, health care, or business service industries.

Competencies

The main reason that the students enrolled in secondary vocational-technical education, according to the survey results, was to gain the competencies they would need for their future. Fifty-nine percent of the students said they enrolled either to prepare for further education or training, or to gain skills in a trade. Fifteen percent enrolled to make school more interesting, and 10 percent enrolled to get a job.

Consistent with their reasons for enrollment, the vast majority of the vocational students reported they received skills training in school. Between 70 and 81 percent reported they received training in each of specific job

skills, teamwork, work habits, communication skills, and critical thinking. Sixty-five percent indicated they received computer training. Between 51 and 53 percent received instruction in math, reading or writing, and in using specific equipment and machinery. (See Figure 50.)

In most cases, students believed the training significantly improved their skills. Among those who received specific job skills training, 62 percent felt their skills improved significantly. (Most of the rest believed their skills improved somewhat.) Between 56 and 66 percent of those who received training in using equipment and machinery, teamwork, and communications reported their skills improved significantly. Between 44 and 53 percent of those who received training in computer skills, critical thinking and work habits, said that these skills improved significantly. Less successful was instruction in basic skills, only about one-third said their math, reading, or writing improved significantly.

Based on matches with college records, *nearly 50 percent of the vocational students continued their education the year after graduating from high school.* Thirty-seven percent were enrolled at a community or technical college during the school year following high school graduation and 12 percent were enrolled at a four-year college or university. Females were more likely than were males to continue their education, and Asians were more likely to continue than were Whites, Hispanics, or African-Americans.

Among those employed in the summer of 1996, sixty-percent of the students said they used one or more skills they obtained during their secondary vocational education on their job. And of those, 85 percent indicated the skill(s) was very useful in performing their job duties.

Information of employer perception of these students' competencies is presented below in the section on employer satisfaction.

Participant Satisfaction

The former students were generally satisfied with the characteristics of their secondary vocational program. Seventy percent said the program definitely met their objectives, while only 3 percent said their objectives were not met at all. Forty-three percent were very satisfied, 53 percent were satisfied, and only 4 percent were dissatisfied with the overall quality of their program. No more than 14 percent were dissatisfied with any aspect of their instruction.

In regards to support services related training, again the survey results show general satisfaction. The service most frequently needed by the students was assistance with resume writing and job interviewing, needed by 55 percent of the students. Forty-three percent needed information about other government programs, and 38 percent needed career counseling and job placement assistance. For each of these services, between two-thirds and three-quarters of those reporting a need received some assistance, and most felt their need was met. In no case

did more than 16 percent of all vocational students leave high school with their need unmet. *Two areas, however, that might be targeted for improvement are career counseling and job placement assistance.* In both cases, about one-third of the 38 percent who need assistance did not have their need met. (See figure 51.)

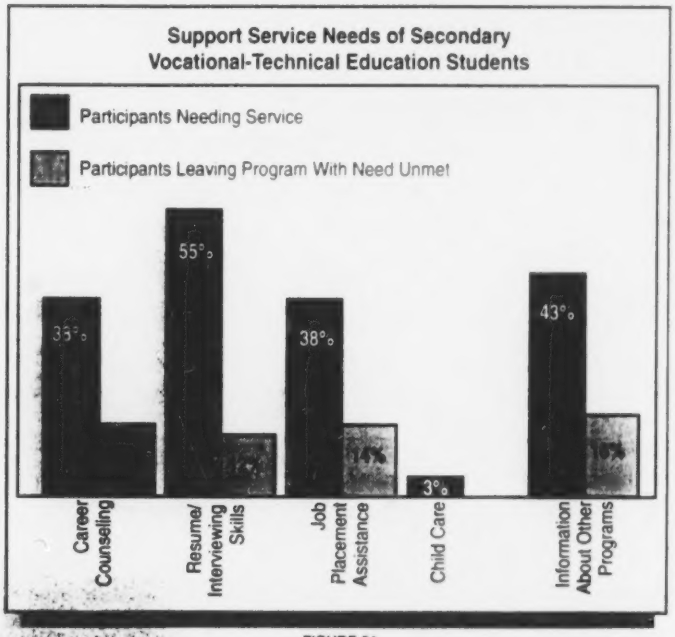

FIGURE 51

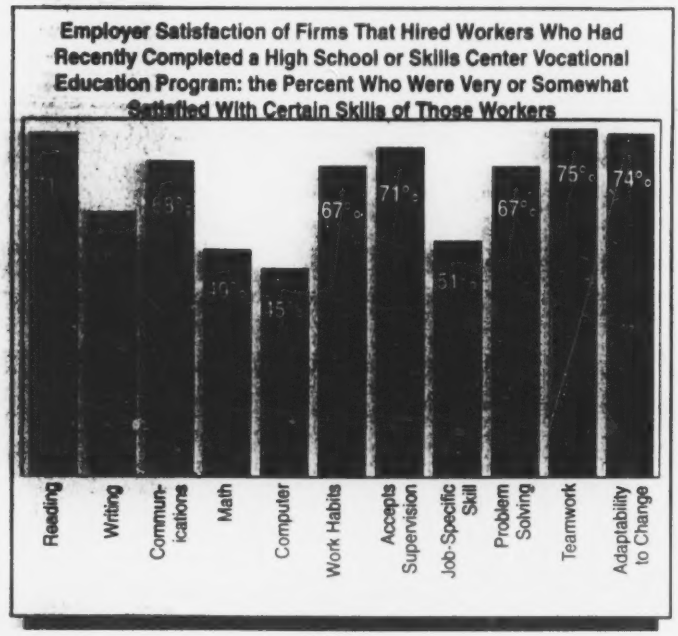

FIGURE 52

The results reveal some significant differences in participant satisfaction between males and females. According to the survey results, females were less likely to receive training in using computers and other equipment and machinery, and in math and critical thinking skills. Females were also likely to be satisfied with advice on program selection, topics covered, and with the quality of equipment and teaching. Females, however, were more satisfied than were males with the support services they received in career counseling and in resume writing and job interviewing.

Employer Satisfaction

The employer survey asked firms to evaluate their new employees who had recently completed a vocational education program at a high school or vocational skills center. *Overall, the results indicate that employers were satisfied with the quality and productivity of these young workers.* Among employers who felt they were in a position to evaluate such employees, 75 percent of employers were satisfied with their productivity, and 74 percent were satisfied with their overall quality. (See Figure 52)

Employers were not as satisfied with certain skills of the former vocational students. *Particular skills that could be stronger include: computer skills (45 percent of employers satisfied), math (49 percent satisfied), problem solving or critical thinking (51 percent satisfied), and writing (57 percent*

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of employers satisfied). In other skill areas, including skills for specific jobs, about 70 percent of the employers were satisfied with the skills of these young workers.

Employment and Earnings

According to the survey responses, 77 percent of the 1993–94 secondary vocational technical students were employed in the summer of 1996. Forty-one percent were in a clerical or sales position, and 26 percent had a service occupation. (See Figure 53.)

Sixty-four percent of the secondary vocational education participants were found to have employment reported for unemployment insurance purposes during the third quarter after they completed secondary school. (The unemployment insurance wage file includes 85 to 90 percent of the employment in Washington and does not include out-of-state employment). Only 12 percent were in covered employment at least 37 hours per week on the average during the third quarter. *The mean wage of those in covered employment was $6.72 per hour, with $1,739 in average quarterly earnings. The median wage was $6.00 per hour; median quarterly earnings were $1,593.* (See Figure 54.)

In considering these wage levels, it is important to remember that these are young, entry-level workers, and such workers are typically paid low wages. The third quarter after they completed secondary vocational education, only 14 percent of those in covered employment individually had sufficient quarterly earnings (if continued all year) to support a family of three above the poverty level. Only one percent had earnings that might be characterized as "family-wage"— twice the poverty level for a family of three.

During the year after graduating from high school, 91 percent of the vocational completers were either in reported employment or enrolled in a two- or four-year in-state college, a very positive outcome. Forty-four percent were enrolled in college and had reported employment. Five percent were enrolled in a college and did not have reported employment. Forty-two percent had reported employment and did not enroll in a two- or four-year college.

Employment of 1993–94 Secondary Vocational-Technical Education Students

Percent With Employment Reported for Unemployment Insurance Purposes the Third Quarter After Graduation	64%
Percent Self-Reporting Employment When Surveyed During the Summer of 1996	77%

FIGURE 53

Employment and Earnings Reported for Unemployment Insurance Purposes of Secondary Vocational-Technical Completers in the Third Quarter After Leaving Program

Percent With Reported Employment of Those Working	64%
Mean Average Quarterly Hours of Work of Those Working	264
Percent Employed an Average of 37 Hours Per Week of Those Working	12%
Mean Quarterly Earnings of Those Working	$1,739
Median Quarterly Earnings of Those Working	$1,593
Percent With Individual Earnings Above 100% Poverty Level ($2,984/quarter) of Those Working	14%
Percent With Individual Earnings Above 200% Poverty Level ($5,968/quarter) of Those Working	1%
Mean Hourly Wage of Those Working	$6.72
Median Hourly Wage of Those Working	$6.00

FIGURE 54

According to survey responses in the summer of 1996, 27 percent of those with a job received medical benefits as part of their employment, and 16 percent received pension benefits. Only 9 percent reported receiving some form of public assistance in the last 12 months.

Most employment and earnings outcomes were higher for white males than for other groups of former students. Although females were slightly more likely than males to be employed (in the third quarter after graduating), males had higher hourly and quarterly earnings. Females were more likely to be employed in the health care industry and in clerical positions and less likely to be employed in manufacturing. Whites were more likely to be employed than were Asians or African-Americans, and Whites had higher hourly earnings than did Blacks.

Short-Term Net Impacts
***Net Impacts** During the Third Quarter (7 to 9 months) **After Completing** Secondary Vocational-Technical Education*

	COMPARISON GROUP	NET IMPACT	PARTICIPANTS (ADJUSTED*)
Employment: *percentage in reported employment*	61.4%	4.2%	65.6%
Mean Hourly Wage: *of those working*	$6.20	$.44	$6.64
Mean Hours Worked: *per quarter of those working*	241 hours	27 hours	268 hours
Mean Quarterly Earnings: *of those working*	$1,546	$201	$1,747
AFDC: *percentage receiving regular aid*	4.2%	- 3.4%	.8%
Food Stamps: *percentage receiving*	10.0%	- 7.0%	3.0%
Medical Benefits: *percentage receiving*	14.1%	- 8.4%	5.7%

**The participant results are not the actual outcomes, but are the outcomes statistically adjusted to control for differences with the comparison group.*

FIGURE 55

Net Impacts

Secondary vocational-technical education had positive net impacts on the employment and earnings of program participants and was associated with large reductions in the percentage of individuals receiving social welfare benefits.

For secondary vocational education, the comparison group was drawn from 16- to 18-year-olds who had registered with the Employment Service and who had either graduated from high school or were still in school. Thus the vocational completers were not compared with high school dropouts. Since they were registrants with the Employment Service, it is likely that most of the comparison group had completed what is commonly referred to as a "general high school track."

Figure 55 shows the short-term net impacts of completing secondary vocational-technical education. During the third quarter after the 1993–94 students graduated from school, there were positive net impacts on each measure of employment and earnings. Secondary vocational education was associated with an increase of 4.2 percentage points in employment reported to Employment Security. Among those with reported employment, the impact on wage rates was a positive $.44 per hour; the impact on hours worked in the quarter was 27 hours; and the impact on mean quarterly earnings was $201.

During the third postprogram quarter, secondary vocational education was also associated with large declines in the percentage of young people receiving certain social welfare benefits. Secondary vocational education was associated with a decrease of 3.4 percentage points in the percentage of individuals receiving regular AFDC benefits; a decrease of 7.0 percentage

points in the percentage receiving food stamps; and a decrease of 8.4 percentage points receiving medical benefits. *These are very important findings suggesting that completing secondary vocational-technical education may be a useful welfare prevention strategy.*

Benefits and Costs

Since data were collected only on vocational education completers from the 1993–94 school year, it was not possible to examine the actual student results for more than one-and-a-half years following graduation. Therefore, the vocational education benefits are based on a different time frame then the other cost-benefit results reported here. In addition, one-and-a-half years of data is not sufficient to forecast benefits to age 65.

The program cost calculation is also somewhat different than that used for the other programs. *The cost of vocational education is the marginal difference in the cost of a student completing vocational-technical education compared to the cost of a student completing another type of high school program.* (The difference is primarily due to smaller student/teacher ratios for vocational education.) The intent of the cost-benefit evaluation is to analyze the net value of completing a vocational type of program, rather than the net value of completing high school.

The cost-benefit analysis finds that during the first year-and-a-half after graduating from school, student gains in earnings and employee benefits were substantially greater than the cost of vocational education to the public.

The marginal cost of a student completing two years of secondary vocational-technical education, as opposed to another type of high school program, is $1,316 in public, or taxpayer costs. During the first year-and-a-half after graduating, the average vocational completer gained $2,542 in net earnings and $508 in employee benefits (such as health insurance and pension benefits). Foregone earnings is shown as a positive number because the program was associated with higher earnings during the time of program enrollment.

The total public, or taxpayer, cost is less than the program cost because secondary vocational education is associated with decreased state welfare expenditures as well as increased tax revenues. During the first year-and-a-half after graduation, the public saved $597 in reduced expenditures on AFDC, food stamps, and medical benefits and $52 on reduced unemployment insurance payments.

Benefits and Costs of Secondary Vocational-Technical Education

FIRST 1.5 YEARS AFTER PROGRAM

	PARTICIPANT	PUBLIC
Earnings	$2,107	
Employee Benefits	$508	
Foregone Earnings	$435	
UI Benefits	- $52	$52
Welfare Benefits	- $597	$597
Program Costs		- $1,316
Taxes	- $300	$552
TOTAL	$2,101	- $115

** Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.*

FIGURE 56

During the first year-and-a-half after the program, the public also gained an estimated $552 in additional unemployment insurance, social security, medicare, income, and sales taxes generated from the increased earnings. In the long run, tax revenues would probably be larger than the direct costs of the program. However, there is insufficient data to enable a forecast of tax revenues to age 65.

Demand for Additional Training

The survey asked the former students whether there were any job skills that they would like to improve either through their employer or through an educational institution or training program. Sixty-five percent responded they would like additional training. The former students were most interested in obtaining more computer training, wanted by 43 percent of the students, and specific job skills training, wanted by 28 percent.

Considering all the training they had received either from their employer or from an educational institution, 26 percent indicated they had too much classroom training and not enough on-the-job training. Fifty-three percent said they had the right mix of classroom and on-the-job training, and 3 percent said they had too much on-the-job and not enough classroom training.

Areas for Possible Improvement

The most obvious area for improvement is data collection and maintenance. The current way that student records are maintained does not lend itself to an efficient evaluation of the results of secondary vocational-technical education as measured by student satisfaction, postprogram education, or labor market outcomes. In this regard, secondary vocational -technical education is not unique, the same situation exists with the rest of K-12 education.

The Office of the Superintendent of Public Instruction and the Workforce Training and Education Coordinating Board have been funding a pilot program to collect information on postprogram results, and that effort was useful for this study. However, if the state is interested in using postprogram information for evaluating the effectiveness of K–12 education, then substantial improvements in data collection and maintenance are required.

While the evaluations find generally positive results, there are certain skills that the student and employer surveys both suggest could be improved. *The schools might do more to improve the computer, problem solving, and basic skills of secondary vocational education completers. There is also room for improvement in career counseling and job placement assistance. In addition, there are some differences in the results for male and female students. Students tend to find employment in fields traditional for their gender, and females report less training and less satisfaction with certain program aspects. As is the case with females, African-American students tend to have lower earnings after graduation. Secondary vocational-technical education should continue its efforts to eradicate these differences.*

Finally, the study confirms that a large majority of vocational students work before graduation. Most of this employment, and most postgraduation employment is in clerical, sales, or service positions. Such occupations generally pay less than average wages. *In order to target preparation for higher paying occupations, schools might do more to connect students with work-based experiences in higher-wage sectors.*

Potential Training Participants

This section of the study examines the employment and training experiences of individuals who would likely benefit from additional workforce training and education, but who were not enrolled in one of the programs included in the study during the 1993-94 school or program year. Examining such potential participants is an important part of assessing the demand for workforce training and the barriers that must be overcome in order to enable more individuals to obtain the training and employment that meets their demand.

In order to select a sample of potential participants, the study drew on individuals who registered with the Washington State Employment Service during the 1993 program year (July 1, 1993, through June 30, 1994). The large majority of Employment Service registrants were recently unemployed and were actively seeking new employment opportunities. They represent a pool of individuals who potentially could benefit from additional workforce training and education. They are also a group for which the state maintains sufficient data for analysis.

In order to focus on individuals who might use training that does not require a bachelor degree (the subject of this study), the potential participants were limited to Employment Service registrants age 16 to 60 who did not have a bachelor degree. Furthermore, in order to focus on individuals most likely to need training, the study included a disproportionate number of individuals from groups that traditionally lack skills training.

The study obtained data on 20,000 individuals from Employment Service records. The study also obtained information from matches with two-year college and unemployment insurance wage records, and from 387 individuals who participated in a telephone survey during the summer and fall of 1995.

Potential Participant Characteristics

The selected group of potential participants is younger, more racially diverse, and less educated than the state's adult population. Thirty-six percent were from 16 to 24 years of age. Forty percent were people of color: 22 percent were Hispanic, 10 percent were African-Americans, six percent were Asian or Pacific Islander, and three percent were Native Americans. Sixty-one percent were male. Thirty-two percent did not have a high school diploma or GED, and 77 percent had no postsecondary education.

Among those potential participants with employment reported for unemployment insurance purposes during the third quarter prior to registering with the Employment Service, 64 percent earned less than $1,000 during the quarter, 24 percent earned between $1,000 and $5,000, and 12 percent earned more than $5,000.

According to the survey responses, 81 percent were unemployed when they registered with the Employment Service, and they had been unemployed for an average of about a year-and-a-half. They had held their last job for an average of about three and one-third years.

Barriers to Employment and the Need for Training

Six to nine months after registering with the Employment Service in 1993-94, many of the individuals had not succeeded in obtaining a job, especially a good paying job. About one-half of the individuals were not working in a job reported for unemployment insurance purposes, more than one-half of those with

such employment did not have sufficient individual earnings to support a family of three above the poverty line.

When surveyed during the summer and fall of 1995, one-third of the individuals reported that they were unemployed, and 26 percent had received some form of public assistance during the previous 12 months (either Aid to Families with Dependent Children, Food Stamps, or the Women, Infants and Children Supplementary Food Program).

Individuals who were actively seeking work were asked why they believed they had not been able to find a job. The responses suggest that many of these individuals believed they could use new job skills in order to find suitable employment. *Just under 60 percent said they lacked the skills needed for the jobs that are available.* Over 80 percent of the individuals under 25 years of age believed their job search was thwarted because they did not possess the skills needed to qualify for the jobs that were available in their area. Other types of personal characteristics were less of an obstacle to obtaining desired employment. Twenty-two percent of the potential participants cited child care (an obstacle cited by many more women than men) and 11 percent cited health problems.

The lack of economic activity in their area was cited by many. Fifty-six percent indicated that there were few jobs available in their line of work or in their geographic area. Sixty percent of all the potential participants responded that the jobs they could get did not pay enough.

The survey also asked the group of potential participants about their desire for additional training. Seventy percent of the individuals, and 79 percent of those under 25 years of age, responded that they would like additional training. Thirty-five percent indicated they would like additional training on computers and 32 percent responded they would like additional training for a specific occupation.

Barriers to Training

The study examined the reasons why potential participants had not entered a training program. Questions were asked separately about community and technical college programs and about other types of public training programs.

The survey responses suggest that a lack of information about community and technical college financial assistance is a frequent reason why potential participants do not enroll.

Among those who had considered attending a community or technical college, 40 percent indicated that cost was a reason they had decided against enrolling. Fifty-three percent of all the potential participants who were aware of a community or technical college in their area did not know whether they would be eligible for financial assistance to attend college. This is a particularly interesting finding since, according to the survey responses of former students, 83 percent of community and technical college workforce training students who needed financial assistance reported they received assistance, and 74 percent said their need was met.

Other barriers were cited less often by those who had considered but decided not to attend a college. Thirty-one percent indicated that time was a problem in attending college, and 10 percent cited child care. Only three percent of all the potential participants did not know of a community or technical college in their area.

The potential participants were also asked about possible barriers to enrolling in other government training programs such as JTPA or Job Opportunity and Basic Skills (JOBS). The large majority of potential participants, 65 percent, did not know whether they were eligible for such other government training programs. The percentage without such knowledge would have been even greater had it not been for the many individuals in the timber dependent regions in Western Washington who apparently knew about government training for dislocated workers.

Areas for Possible Improvement

Based upon their relatively low levels of educational attainment and their survey responses, many of the potential training participants who had registered with the Employment Service could use additional training. In order to link more of these potential participants to a training program, the survey results suggest that the state could do more to provide them with information about their eligibility for financial assistance to attend a community or technical college, and about their eligibility to enroll in other types of government training programs.

APPENDIX

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Workforce Training: Needs and Practices of Washington State Employers

A Survey for The Washington State
Workforce Training and Education Coordinating Board

Battelle
Putting Technology To Work

WHAT IS THIS RESEARCH STUDY ABOUT?

This statewide employer survey was undertaken to learn about the employee training and retraining needs of firms and organizations doing business in Washington State. The Washington State Legislature has requested that the Workforce Training and Education Coordinating Board (WTECB) conduct an evaluation of the state's major workforce training programs. Information learned from the study will be used to assist policy makers in planning State workforce education and training policy in the future.

WHO IS CONDUCTING THIS STUDY?

The Battelle Memorial Institute is conducting this study for the Washington State Workforce Training and Education Coordinating Board (WTECB). Battelle is the largest nonprofit research organization in the world. The study is being conducted by the Center for Public Health Research and Evaluation at the Battelle Seattle Research Center, a division of the Institute specializing in social policy research.

ANSWERING QUESTIONS

All of your responses to this survey will be kept confidential and used only for research purposes. Answers to all questions are voluntary, but we ask that you not skip questions, unless specifically instructed to do so. Instructions are PRINTED IN CAPITALS. Some instructions ask that you circle only one of a number of possible responses, while instructions for other questions ask that you circle all that apply.

Please read all instructions and all possible response choices for each question before answering in order that the response you select best reflects your answer. Most questions have response choices that are number-coded. For those questions, please circle the number next to the response that best reflects your answer.

SKIP INSTRUCTIONS

The questionnaire was designed so that no one will have to answer every question. Depending upon your response to a particular question, you may be instructed to skip over one or more questions immediately following the question you just answered. In the example shown below, a person answering the question "yes" would go on to answer question 26 while a person answering "no" would skip to question 31.

25. In the last 12 months, did your firm/organization have any difficulty finding qualified applicants for any of the jobs that you were trying to fill?

1 . . . . . Yes

0 . . . . . No → PLEASE SKIP TO QUESTION 31.

WHAT TO DO IF YOU HAVE QUESTIONS

If you have questions about the survey, please call the Battelle Seattle Research Center toll-free number: 1-800-648-4290. Ask for Jan Leonard, she will be happy to answer your questions.

SECTION 1:
SKILL QUALITY OF RECENTLY HIRED EMPLOYEES

These first questions are about the types of occupations for which your firm/organization has hired employees in the last 12 months, and about the quality of the skills and training those employees had when they began working for your firm/organization.

1. Has your firm/organization hired any new employees in the last 12 months?

   1 . . . . . Yes
   0 . . . . . No → **PLEASE SKIP TO PAGE 9, QUESTION 22.**

2. Please list up to three occupations for which your firm/organization hired the most employees in the last 12 months and the approximate number of new employees your firm/organization hired for each occupation. PLEASE WRITE THE TITLES OF UP TO 3 OCCUPATIONS FOR WHICH YOU HIRED THE MOST EMPLOYEES IN THE LAST 12 MONTHS.

	Occupational Title	Number of new hires in the last 12 months
Occupation 1		
Occupation 2		
Occupation 3		

3. Thinking about the applicant pool for each of the occupations you listed in Question 2, about how many ***qualified applicants*** applied for employment in the last 12 months for each of these occupations? Did your firm/organization have many qualified applicants, some qualified applicants, few qualified applicants or no qualified applicants for Occupation 1? For Occupation 2? For Occupation 3? PLEASE CIRCLE ONLY ONE NUMBER FOR EACH OCCUPATION.

	3. How many *qualified applicants*?			
	Many qualified applicants	Some qualified applicants	Few qualified applicants	No qualified applicants
Occupation 1	1	2	3	4
Occupation 2	1	2	3	4
Occupation 3	1	2	3	4

The next questions are about how satisfied you were with the skills of the people you hired in the three occupations listed above. We are interested in three categories of skill:

- **Occupational and/or professional skills,**
- **Work-place skills, and**
- **Overall skill levels.**

4. Thinking about the ***occupational and/or professional skills*** those employees need to do their jobs, how satisfied was your firm/organization with the occupational skills of the new hires when they first began working for your firm/organization? For Occupation # 1 (from Question 2), would you say your firm/organization was very satisfied with these employees' skills, somewhat satisfied, or not very satisfied when they first began working for your firm/organization? Please evaluate Occupation # 2 and Occupation # 3 on the same scale. PLEASE CIRCLE ONLY ONE NUMBER FOR EACH OCCUPATION.

4. How satisfied was your firm/organization with the ***occupational and/or professional skills*** of the new hires when they first began working?			
	Very satisfied	Somewhat Satisfied	Not Very Satisfied
Occupation 1	1	2	3
Occupation 2	1	2	3
Occupation 3	1	2	3

5. One type of skill that many employers value might be called "work-place skills." These include: the ability to communicate well with co-workers and supervisors, to follow directions and/or give supervision, to adapt to changes in duties or responsibilities, to use good judgment, and to have good work habits and a positive attitude. For employees hired in the last 12 months in Occupation # 1 (from Question 2), would you say your firm/organization was very satisfied with the ***work-place skills*** of these employees when they first began working for your firm/organization, somewhat satisfied, or not very satisfied? Please evaluate Occupation # 2 and Occupation # 3 on the same scale. PLEASE CIRCLE ONLY ONE NUMBER FOR EACH OCCUPATION.

5. How satisfied was your firm/organization with the *work-place skills* of the new hires when they first began working?			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied
Occupation 1	1	2	3
Occupation 2	1	2	3
Occupation 3	1	2	3

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6. For employees hired in the last 12 months in Occupation # 1 (from Question 2), would you say your firm/organization was very satisfied with the ***overall skill level*** of these employees when they first began working for your firm/organization, somewhat satisfied, or not very satisfied? Please rate Occupation # 2 and Occupation # 3 on the same scale. PLEASE CIRCLE ONLY ONE NUMBER FOR EACH OCCUPATION.

	6. How satisfied was your firm/organization with the *overall skill level* of these employees when they first began working?		
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied
Occupation 1	1	2	3
Occupation 2	1	2	3
Occupation 3	1	2	3

EMPLOYEES FROM DIFFERENT KINDS OF EDUCATION PROGRAMS

These next questions are about the skill levels of employees trained by various types of educational institutions or training programs. The questions pertain to **all** *employees hired in the last 12 months, not just those in the three occupations in Question 2. We are interested in anyone your firm/organization hired in the last 12 months, who attended, or was trained by, one of these five types of institutions or programs:*

- High school vocational education programs
- Community or technical colleges
- Private Industry Council (PIC) or Job Training Partnership Act (JTPA) programs
- Private trade or business schools
- Adult basic skills programs

7. **In the last 12** months has your firm/organization hired any new employees who had recently completed a ***vocational education program at a high school or vocational skills center?***

1 . . . . . Yes

0 . . . . . No → **PLEASE SKIP TO QUESTION 10.**

9 . . . . . Don't Know → **PLEASE SKIP TO QUESTION 10.**

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8. How satisfied was your firm/organization with each of the skills listed below of new employees who had recently completed a ***vocational education program at a high school or vocational skills center***? PLEASE CIRCLE ONLY ONE NUMBER FOR EACH SKILL. IF YOU ARE UNABLE TO EVALUATE A SKILL CIRCLE '8' IN THAT ROW.

	8. How satisfied with the . . . of new employees from a *vocational program at a high school or skill center?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. reading skills	1	2	3	8
b. writing skills	1	2	3	8
c. math skills	1	2	3	8
d. computer skills	1	2	3	8
e. occupation-specific skills needed to do the job	1	2	3	8
f. team work skills	1	2	3	8
g. problem solving or critical thinking skills	1	2	3	8
h. communication skills	1	2	3	8
i. work habits and attitudes	1	2	3	8

9. How satisfied was your firm/organization with the overall productivity and overall quality of the work performed by new employees who had recently completed ***a vocational education program at a high school or vocational skills center?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH ATTRIBUTE. IF YOU ARE UNABLE TO EVALUATE AN ATTRIBUTE CIRCLE '8' IN THAT ROW.

	9. How satisfied with . . . of new employees from a *vocational program at a high school or skill center?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. the overall productivity	1	2	3	8
b. the overall quality of the work	1	2	3	8

10. In the last 12 months has your firm/organization hired any new employees who had recently completed *a vocational certificate or vocational degree program at a community or technical college?* [**PLEASE NOTE:** This question refers to **vocational** training only. It does not pertain to anyone who pursued general liberal arts training leading to an associate of arts degree (AA) from a community college.]

1 . . . . . Yes

0 . . . . . No → **PLEASE SKIP TO QUESTION 13.**

9 . . . . . Don't Know → **PLEASE SKIP TO QUESTION 13.**

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11. How satisfied was your firm/organization with each of the skills listed below of new employees who had recently completed ***a vocational certificate or vocational degree program at a community or technical college?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH SKILL. IF YOU ARE UNABLE TO EVALUATE A SKILL CIRCLE '8' IN THAT ROW.

	11. How satisfied with the . . . of new employees from *a vocational certificate or vocational degree program at a community or technical college?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. reading skills	1	2	3	8
b. writing skills	1	2	3	8
c. math skills	1	2	4	8
d. occupation-specific skills needed to do the job	1	2	3	8
e. computer skills	1	2	3	8
f. team work skills	1	2	3	8
g. problem solving or critical thinking skills	1	2	3	8
h. communication skills	1	2	3	8
i. work habits and attitudes	1	2	3	8

12. How satisfied was your firm/organization with the overall productivity and overall quality of the work performed by new employees who had recently completed ***a vocational certificate or vocational degree program at a community or technical college?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH ATTRIBUTE. IF YOU ARE UNABLE TO EVALUATE AN ATTRIBUTE CIRCLE '8' IN THAT ROW.

	12. How satisfied with . . . of new employees from *a vocational certificate or degree program at a community or technical college?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. the overall productivity	1	2	3	8
b. the overall quality of the work	1	2	3	8

13. In the last 12 months has your firm/organization hired any new employees who had recently completed a ***Private Industry Council (PIC) or JTPA training program***?

1 . . . . . Yes

0 . . . . . No → **PLEASE SKIP TO QUESTION 16.**

9 . . . . . Don't Know → **PLEASE SKIP TO QUESTION 16.**

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14. How satisfied was your firm/organization with each of the skills listed below of new employees who had recently completed a ***Private Industry Council (PIC) or JTPA training program?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH SKILL. IF YOU ARE UNABLE TO EVALUATE A SKILL CIRCLE '8' IN THAT ROW.

	14. How satisfied with the . . . of new employees from a *Private Industry Council (PIC) or JTPA training program?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. reading skills	1	2	3	8
b. writing skills	1	2	3	8
c. math skills	1	2	3	8
d. occupation-specific skills needed to do the job	1	2	3	8
e. computer skills	1	2	3	8
f. team work skills	1	2	3	8
g. problem solving or critical thinking skills	1	2	3	8
h. communication skills	1	2	3	8
i. work habits and attitudes	1	2	3	8

15. How satisfied was your firm/organization with the overall productivity and overall quality of the work performed by new employees who had recently completed a ***Private Industry Council or JTPA training program?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH ATTRIBUTE. IF YOU ARE UNABLE TO EVALUATE AN ATTRIBUTE CIRCLE '8' IN THAT ROW.

	15. How satisfied with . . . of new employees from a *Private Industry Council or JTPA training program?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. the overall productivity	1	2	3	8
b. the overall quality of the work	1	2	3	8

16. In the last 12 months has your firm/organization hired any new employees who had recently completed a *training program at a privately operated trade or business school?*

1 . . . . . Yes

0 . . . . . No → **PLEASE SKIP TO QUESTION 19.**

9 . . . . . Don't Know → **PLEASE SKIP TO QUESTION 19.**

17. How satisfied was your firm/organization with each of the skills listed below of new employees who had recently completed a ***training program at a privately operated trade or business school?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH SKILL. IF YOU ARE UNABLE TO EVALUATE A SKILL CIRCLE '8' IN THAT ROW.

	17. How satisfied with the . . . of new employees from a *privately operated trade or business school?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. reading skills	1	2	3	8
b. writing skills	1	2	3	8
c. math skills	1	2	3	8
d. occupation-specific skills needed to do the job	1	2	3	8
e. computer skills	1	2	3	8
f. team work skills	1	2	3	8
g. problem solving or critical thinking skills	1	2	3	8
h. communication skills	1	2	3	8
i. work habits and attitudes	1	2	3	8

18. How satisfied was your firm/organization with the overall productivity and overall quality of the work performed by new employees who had recently completed a ***training program at a privately operated trade or business school?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH ATTRIBUTE. IF YOU ARE UNABLE TO EVALUATE AN ATTRIBUTE CIRCLE '8' IN THAT ROW.

	18. How satisfied with . . . of new employees from a *privately operated business or trade program?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. the overall productivity	1	2	3	8
b. the overall quality of the work	1	2	3	8

19. In the last 12 months has your firm/organization hired any new employees who had recently participated in an ***adult basic skills program at a community or technical college?***

1 . . . . . Yes
0 . . . . . No → **PLEASE SKIP TO QUESTION 22.**
9 . . . . . Don't Know → **PLEASE SKIP TO QUESTION 22.**

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20. How satisfied was your firm/organization with each of the skills listed below of new employees who had recently participated in an ***adult basic skills program at a community or technical college?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH SKILL. IF YOU ARE UNABLE TO EVALUATE A SKILL CIRCLE '8' IN THAT ROW.

	20. How satisfied with the . . . of new employees who participated in an *adult basic skills program?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. reading skills	1	2	3	8
b. writing skills	1	2	3	8
c. math skills	1	2	3	8
d. occupation-specific skills needed to do the job	1	2	3	8
e. computer skills	1	2	3	8
f. team work skills	1	2	3	8
g. problem solving or critical thinking skills	1	2	3	8
h. communication skills	1	2	3	8
i. work habits and attitudes	1	2	3	8

21. How satisfied was your firm/organization with the overall productivity and overall quality of the work performed by new employees who had recently participated in ***an adult basic skills program at a community or technical college?*** PLEASE CIRCLE ONLY ONE NUMBER FOR EACH ATTRIBUTE. IF YOU ARE UNABLE TO EVALUATE AN ATTRIBUTE CIRCLE '8' IN THAT ROW.

	21. How satisfied with . . . of new employees from *an adult basic skills program?*			
	Very Satisfied	Somewhat Satisfied	Not Very Satisfied	Not Able to Evaluate
a. the overall productivity	1	2	3	8
b. the overall quality of the work	1	2	3	8

DIFFICULTIES IN FINDING QUALIFIED APPLICANTS

22. **In the last 12 months**, did your firm/organization have any difficulty finding qualified applicants for ***any of the jobs*** that you were trying to fill? IF YOU WERE NOT TRYING TO HIRE ANY EMPLOYEES, PLEASE CIRCLE '8' FOR NOT APPLICABLE.

1 . . . . . Yes

0 . . . . . No → **PLEASE SKIP TO PAGE 11, QUESTION 27.**

8 . . . . . Not Applicable → **PLEASE SKIP TO PAGE 11, QUESTION 27.**

23. Please list up to three occupations for which your firm/organization had the most difficulty finding qualified applicants in the last 12 months. WRITE THE TITLES OF UP TO 3 OCCUPATIONS FOR WHICH YOUR FIRM/ORGANIZATION HAD DIFFICULTY FINDING QUALIFIED APPLICANTS.

Occupation 1: _____

Occupation 2: _____

Occupation 3: _____

Now we would like to know about any difficulties your firm/organization experienced in the last twelve (12) months finding qualified applicants with various levels of educational attainment and types of skills. The following questions pertain to any jobs for which you were hiring in the last 12 months.

24. Sometimes firms/organizations may experience difficulty finding qualified applicants with the ***formal education*** **required to perform certain jobs. In general, how much difficulty has your firm/organization experienced in the last 12 months finding qualified applicants with the different education levels listed below?** PLEASE CIRCLE ONLY ONE NUMBER IN EACH ROW. IF YOU DID NOT NEED EMPLOYEES WITH THAT LEVEL OF EDUCATION, CIRCLE "NOT APPLICABLE" IN THAT ROW.

	24. Extent of difficulty finding qualified applicants . . .			
	Much Difficulty	Some Difficulty	No Difficulty	Not Applicable
a. with a master's (M.A. or M.S.), doctoral (Ph.D.), or professional degree from a college or university? . . .	1	2	3	8
b. with a baccalaureate (B.A. or B.S.) degree?	1	2	3	8
c. with a two-year academic (A.A. or A.S.) degree ? . .	1	2	3	8
d. with a two-year vocational degree?	1	2	3	8
e. with a vocational diploma or certificate?	1	2	3	8
f. with some college course work?	1	2	3	8
g. with a high school diploma?	1	2	3	8
h. with a GED?	1	2	3	8
i. *without* a high school diploma or GED?	1	2	3	8

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25. Firms/Organizations may also experience difficulty in finding qualified applicants with certain kinds of abilities and job skills. Has your firm/organization had difficulty finding employees with the following skills? PLEASE CIRCLE ONE NUMBER FOR EACH. IF A SKILL IS NOT REQUIRED, CIRCLE '8' NOT APPLICABLE.

	25. Extent of difficulty finding applicants with . . .			
	Much Difficulty	Some Difficulty	No Difficulty	Not Applicable
a. reading skills?	1	2	3	8
b. writing skills?	1	2	3	8
c. math skills?	1	2	3	8
d. occupation-specific skills needed to do the job?	1	2	3	8
e. computer skills?	1	2	3	8
f. positive work habits and attitudes?	1	2	3	8
g. ability to accept supervision?	1	2	3	8
h. ability to adapt to changes in duties and responsibilities?	1	2	3	8
i. team work skills?				
j. problem solving or critical thinking skills?	1	2	3	8
k. communication skills?	1	2	3	8

26. Has the difficulty your firm/organization experienced in finding qualified applicants caused any of the following? PLEASE CIRCLE 'Y' FOR YES, 'N' FOR NO OR 'DK' FOR DON'T KNOW FOR EACH.

	26. Did difficulty finding qualified applicants . . . ?		
a. lower overall productivity?	Y	N	DK
b. reduce product or service quality?	Y	Y	DK
c. reduce production output or sales?	Y	Y	DK
d. prevent your firm/organization from expanding its facilities?	Y	N	DK
e. prevent your firm/organization from developing new products or services ?	Y	N	DK
f. cause your firm/organization to move some operations out of the State of Washington?	Y	N	DK

FUTURE NEEDS FOR SKILLED EMPLOYEES

27. Now we would like you to think about future needs of your firm/organization. Thinking about the next five (5) years, please list up to three occupations for which your firm/organization expects to hire the most employees. PLEASE WRITE THE TITLES OF UP TO 3 OCCUPATIONS FOR WHICH YOU EXPECT YOUR FIRM/ORGANIZATION TO HIRE THE MOST EMPLOYEES IN THE NEXT 5 YEARS.

Occupation 1: _____

Occupation 2: _____

Occupation 3: _____

28. For which single occupation from those you listed in Question 27, do you expect to hire the *most* employees in the next five (5) years? WRITE THE TITLE OF THE OCCUPATION FOR WHICH YOU EXPECT YOUR FIRM/ORGANIZATION TO HIRE THE MOST EMPLOYEES.

OCCUPATION: _____

29. Thinking about the personnel your firm/organization will need in the next five years, please indicate how you expect those needs to change for employees with different levels of educational attainment. Will your firm's/organization's need for employees with each of the types of educational attainment listed below increase, stay about the same, or decrease in the next five years? PLEASE CIRCLE ONLY ONE NUMBER IN EACH ROW. IF YOU DO NOT ANTICIPATE NEEDING EMPLOYEES WITH THAT LEVEL OF EDUCATION, CIRCLE '8' - NOT NEEDED.

	29. In the next 5 years, do you expect your firm's/organization's need for personnel . . . to increase, stay about the same, or decrease?			
	Increase	Stay about the same	Decrease	Not Needed
a. with a master's (M.A. or M.S.), doctoral (Ph.D.) or professional degree from a college or university . . .	1	2	3	8
b. with a baccalaureate (B.A. or B.S.) degree	1	2	3	8
c. with a two-year academic (A.A. or A.S.) degree . .	1	2	3	8
d. with a two-year vocational degree	1	2	3	8
e. with a vocational diploma or certificate	1	2	3	8
f. with some college course work	1	2	3	8
g. with a high school diploma	1	2	3	8
h. with a GED	1	2	3	8
i. *without* a high school diploma or a GED	1	2	3	8

SECTION 2:
EMPLOYEE TRAINING YOU PROVIDE

This section is about training that your firm/organization may provide to employees. First we ask about public and private training providers with which your firm/organization may have contracted. Then we ask about classroom training and/or on-the-job training which your firm/organization provides or pays for. In answering these next questions, please include all employees: full-time, part-time, temporary, seasonal, salaried and hourly.

1. Does your firm/organization have a separate department that is responsible for the provision of training for your firm's/organization's employees?

   1 . . . . . Yes

   0 . . . . . No

2. Does your firm/organization have an arrangement with any ***public*** education and training providers (such as a high school, vocational skill center, community or technical college, or a government sponsored training and education program) to provide education and training services to your employees?

   1 . . . . . Yes

   0 . . . . . No → **PLEASE SKIP TO QUESTION 6.**

3. With which of the following *public* education and training providers does your firm/organization have an arrangement to provide education and training services? PLEASE CIRCLE ALL THAT APPLY.

   1 . . . . . a. Vocational/technical program through a high school and/or skill center
   1 . . . . . b. Community and/or technical college
   1 . . . . . c. Four-year college and/or university
   1 . . . . . d. Private Industry Council (PIC) or JTPA program
   1 . . . . . e. Other government sponsored training and education programs, specify: _____
   1 . . . . . f. Other, specify: _____

4. Have the ***public*** education and training providers used by your firm/organization satisfied your firm's/organization's training requirements?

   1 . . . . . Yes → **PLEASE SKIP TO QUESTION 7.**

   0 . . . . . No

5. Listed below are reasons why *public* education and training providers may not satisfy a firm's/organization's training requirements. Please indicate if any of these are reasons why public education and training programs may not meet your training needs. PLEASE CIRCLE ALL THAT APPLY.

Public training and education providers . . .

1 . . . . . a. cannot train our employees in a timely fashion.
1 . . . . . b. do not offer the skills training our employees need.
1 . . . . . c. do not offer training classes at a time convenient for our employees.
1 . . . . . d. are not in a location that is convenient for our employees to reach.
1 . . . . . e. do not have the necessary equipment or facilities to train our employees.
1 . . . . . f. do not have enough qualified instructors to train our employees.
1 . . . . . g. have too much red tape/administrative bureaucracy.
1 . . . . . h. Other, specify: _____

NOW PLEASE SKIP TO QUESTION 7

6. Listed below are some reasons why firms/organizations may not have arrangements with *public* education and training providers to provide education and training for their employees. Please indicate if any of these are reasons why your firm/organization does not have such an arrangement. PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. The cost would be too high.
1 . . . . . b. Our firm/organization conducts its own training.
1 . . . . . c. Our firm/organization only uses private education and training providers.
1 . . . . . d. Public training and education providers do not offer the type of training our employees need.
1 . . . . . e. Our firm/organization has been able to find all the qualified workers that it needs.
1 . . . . . f. Public training and education providers have too much red tape/ administrative bureaucracy.
1 . . . . . g. Other, specify: _____

7. Does your firm/organization have an arrangement with any *private* education and training providers (such as private training contractors/consultants, private trade or business schools, business or industry associations, unions, etc.) to provide education and training services to its employees?

1 . . . . . Yes

0 . . . . . No → **PLEASE SKIP TO QUESTION 11.**

8. With which of the following *private* education and training providers does your firm/organization have an arrangement to provide education and training services? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. Private training contractors/consultants
1 . . . . . b. Private trade or business schools
1 . . . . . c. Other private firms/organizations, specify: _____
1 . . . . . d. Industry or trade associations
1 . . . . . e. Unions
1 . . . . . f. Other, specify: _____

9. Have the ***private*** education and training providers used by your firm/organization met most of your firm's/organization's training needs?

1 ..... Yes → **PLEASE SKIP TO TOP OF PAGE 15.**

0 ..... No

10. Listed below are reasons why ***private*** education and training providers may not meet a firm's/organization's training needs. Please indicate if any of these are reasons why private education and training programs may not meet your training needs. PLEASE CIRCLE ALL THAT APPLY.

Private training and education providers . . .

1 ..... a. cannot train our employees in a timely fashion.
1 ..... b. do not offer the skills training our employees need.
1 ..... c. do not offer training classes at a time convenient for our employees.
1 ..... d. are not in a location that is convenient for our employees to reach.
1 ..... e. do not have the necessary equipment or facilities to train our employees.
1 ..... f. do not have enough qualified instructors to train our employees.
1 ..... g. have too much red tape/administrative bureaucracy.
1 ..... h. other, specify: _____

NOW PLEASE SKIP TO TOP OF PAGE 15

11. Listed below are some reasons why firms/organizations may not have arrangements with **private** education and training providers to provide education and training for their employees. Please indicate if any of these are reasons why your firm/organization does not have such an arrangement. PLEASE CIRCLE ALL THAT APPLY.

1 ..... a. The cost would be too high.
1 ..... b. Our firm/organization conducts its own training.
1 ..... c. Our firm/organization only uses public education and training providers.
1 ..... d. Private training and education providers do not offer the type of training our employees need.
1 ..... e. Our firm/organization has been able to find all the qualified workers it needs.
1 ..... f. Private training and education providers have too much red tape/ administrative bureaucracy.
1 ..... g. Other, specify: _____

CLASSROOM TRAINING, WORKSHOPS, SEMINARS YOU PROVIDE

These next questions, are about **classroom training, workshops or seminars** *your firm/organization may use to train your employees. Please count only types of training that last four hours or longer (a half day). These classes or workshops may be held either at the work site or any other location, and may be conducted either by personnel from your firm/organization or by sources outside your firm/organization.*

12. Did your firm/organization provide (or pay for) any ***classroom training, workshops or seminars (lasting at least four hours)*** for any employees in the last 12 months?

1 ..... Yes → **PLEASE SKIP TO QUESTION 14.**

0 ..... No

13. Why did your firm/organization ***not*** provide (or pay for) classroom training, workshops or seminars (lasting at least four hours) in the last 12 months? PLEASE CIRCLE ALL THAT APPLY.

1 ..... a. Employees have adequate skills for jobs
1 ..... b. On-the-job training satisfies our needs
1 ..... c. Time for classroom training, workshops and seminars is not available
1 ..... d. Cost of classroom training, workshops and seminars is too high
1 ..... e. Employee turnover is too high to justify training
1 ..... f. Other, specify: _____

NOW PLEASE SKIP TO PAGE 18, QUESTION 24.

14. **Now we** would like to know about classroom or workshop training for three specific skill areas:

- **Work-place practices**, policies and procedures affecting employee relations;
- **Basic skills** like reading, writing and basic math; and
- **Job-specific skills** needed to do a particular job.

In the last 12 months did your firm/organization provide (or pay for) *classroom training, workshops or seminars (lasting at least four hours) in* ***work-place practices*** for any employees? Work-place practices may include **training in policies** and practices that affect employee relations (e.g., work-place diversity or sexual harassment **training), affect** employee health and safety (e.g., work-place safety and health requirements) and the work **environment** (e.g., how to work in teams, how to improve work performance, etc.).

1 ..... Yes

0 ..... No → **PLEASE SKIP TO QUESTION 17.**

15. Who conducted the ***work-place practices*** training for your firm's/organization's employees in the last 12 months? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. Our firm's/organization's personnel
1 . . . . . b. Private training contractor
1 . . . . . c. Community or technical college
1 . . . . . d. Four-year college or university
1 . . . . . e. Other education provider, specify: _____
1 . . . . . f. Union
1 . . . . . g. Other, specify: _____

16. Why did your firm/organization provide (or pay for) training in ***work-place practices*** in the last 12 months? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. To increase productivity
1 . . . . . b. To keep employees up-to-date with industry/business/occupational practices
1 . . . . . c. To meet legal requirements for work-place safety
1 . . . . . d. To meet legal requirements of employment laws
1 . . . . . e. As part of a collective bargaining agreement
1 . . . . . f. To meet changing needs in industry/business/occupational technology
1 . . . . . g. Other, specify: _____

17. In the last 12 months did your firm/organization provide (or pay for) *classroom training, workshops or seminars (lasting at least four hours) in* ***basic skills*** (e.g., reading, writing, arithmetic, or English language) for any of its employees?

1 . . . . . Yes
0 . . . . . No → **PLEASE SKIP TO QUESTION 20.**

18. Who conducted the ***basic skills*** training for your firm's/organization's employees in the last 12 months? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. Our firm's/organization's personnel
1 . . . . . b. Private training contractor
1 . . . . . c. Community or technical college
1 . . . . . d. Four-year college or university
1 . . . . . e. Other education provider, specify: _____
1 . . . . . f. Union
1 . . . . . g. Other, specify: _____

19. Why did your firm/organization provide (or pay for) classroom training, workshops or seminars in ***basic skills*** (e.g., reading, writing, arithmetic, or English language skills)? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. To meet health and safety requirements
1 . . . . . b. To improve the productivity of certain employees
1 . . . . . c. To reduce errors and waste
1 . . . . . d. As part of a collective bargaining agreement
1 . . . . . e. Unable to hire employees with basic skills necessary to perform jobs
1 . . . . . f. Basic skills are critical to the jobs performed here
1 . . . . . g. Other, specify: _____

20. In the last 12 months did your firm/organization provide (or pay for) *classroom training, workshops or seminars (lasting at least four hours) in* ***job-specific skills*** (e.g., training that upgrades employee skills, extends employee skills or qualifies workers for a job)?

1 . . . . . Yes
0 . . . . . No → **PLEASE SKIP TO QUESTION 23.**

21. Who conducted ***job-specific skills*** training for your firm's/organization's employees in the last 12 months? PLEASE CIRCLE ALL THAT APPLY

1 . . . . . a. Our firm's/organization's personnel
1 . . . . . b. Private training contractor
1 . . . . . c. Community or technical college
1 . . . . . d. Four-year college or university
1 . . . . . e. Other education provider, specify: _____
1 . . . . . f. Union
1 . . . . . g. Other, specify: _____

22. Why did your firm/organization provide training in ***job-specific skills*** in the last 12 months? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. To increase productivity
1 . . . . . b. To keep employees up-to-date with industry/business/occupational practices
1 . . . . . c. To meet changing needs in industry/business/occupational technology
1 . . . . . d. To provide professional development opportunities for employees
1 . . . . . e. Unable to hire employees with necessary job-specific skills
1 . . . . . f. Other, specify: _____

23. What percentage of employees of each type listed below did you provide classroom training, workshops or seminars (lasting at least four hours) to in the last 12 months? IF YOU PROVIDED NO CLASSROOM TRAINING, WORKSHOPS OR SEMINARS TO CERTAIN TYPES OF EMPLOYEES, PLEASE ENTER '0'.

a. Managers/Supervisors . . . . . _____%
b. Professional/Technical. . . . . _____%
c. Production workers . . . . . _____%
d. Office/Clerical/Sales . . . . . _____%
e. Service workers? . . . . . _____%

100

24. Approximately what percent of your current employees in each category listed below would you say need further training in a classroom program (i.e., a program such as taught at a local community college or vocational school) to reach the level of productivity your firm/organization wants?

a. Managers/Supervisors . . . . . _____%
b. Professional/Technical. . . . . _____%
c. Production workers . . . . . _____%
d. Office/Clerical/Sales . . . . . _____%
e. Service workers? . . . . . _____%

25. In the ***last three (3) years***, has the number of your employees who receive classroom training, workshops or training seminars of some kind increased, stayed about the same or decreased? PLEASE CIRCLE ONLY ONE.

1 . . . . . Increased
2 . . . . . Stayed about the same
3 . . . . . Decreased

ON-THE-JOB TRAINING YOU PROVIDE

These next questions refer to **on-the-job** *training. During on-the-job training, the worker is performing the duties or learning the duties that the job requires. One example is having a co-worker teach an employee how to operate a machine. Another example is having someone show a new employee the bookkeeping system. A third example would be on-the-job training that is part of an apprenticeship program. In answering these next questions please include all employees: full-time, part-time, temporary, seasonal, salaried and hourly.*

26. Does your firm/organization provide any type of on-the-job training for its employees?

1 . . . . . Yes → **PLEASE SKIP TO QUESTION 28.**

0 . . . . . No

27. Why does your firm/organization ***not*** provide on-the-job training? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. All training is classroom training
1 . . . . . b. Employees are able to learn on their own
1 . . . . . c. Employees already have the necessary skills
1 . . . . . d. There is no time to train employees
1 . . . . . e. Employee turnover is too high to justify training

NOW PLEASE SKIP TO SECTION 3 ON PAGE 21.

28. **Who conducts** this training? PLEASE CIRCLE ALL THAT APPLY

1 . . . . . a. Co-workers
1 . . . . . b. Company training personnel
1 . . . . . c. Managers/Supervisors
1 . . . . . d. Other, specify: _____

29. **Which of the** following types of on-the-job training does your firm/organization provide to employees? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . a. **Basic skills training** (basic reading, writing, arithmetic, and/or English language skills)
1 . . . . . b. **Work-place skills training** (how to work in teams, how to improve work performance, etc.)
1 . . . . . c. **Job-specific skills training** (training to upgrade employee skills, extend employee skills or to qualify workers for a job)

30. **Does your** firm/organization have an arrangement with any education and training providers to provide on-the-job training, work experience, internship programs, or other actual job experience to their students?

1 . . . . . Yes
0 . . . . . No → **PLEASE SKIP TO SECTION 3 ON PAGE 21**

31. With which of the following education and training providers does your firm/organization have a formal agreement to provide on-the-job training, work experience, internship programs or other actual job experience to their students? PLEASE CIRCLE ALL THAT APPLY.

1 . . . . . Adult basic skills programs at a community college
2 . . . . . Vocational programs through high schools or skill centers
3 . . . . . Community and/or technical colleges
4 . . . . . Four-year colleges and/or universities
5 . . . . . JTPA or Private Industry Council
6 . . . . . Other government sponsored education programs
7 . . . . . Private training contractors/consultants
8 . . . . . Private trade or business schools
9 . . . . . Other private firms/organizations
10 . . . . . Industry or trade associations
11 . . . . . Other, specify: _____

SECTION 3:
BACKGROUND INFORMATION

1. In what year did your firm/organization start operations in this location?

   ENTER YEAR [ ]

2. Is this the only location, plant, or branch in your firm/organization, or are there others? PLEASE CIRCLE ONLY ONE.

   1 . . . . . only one
   2 . . . . . there are other locations, plants, or branches

3. Approximately what percentage of your firm's/organization's employees are full-time workers (i.e., work 35 hours per week or more)? Also, approximately what percentage are part-time workers (i.e., work less than 35 hours per week) and what percentage are temporary or contract workers? PLEASE ENTER A PERCENTAGE FOR EACH TYPE BELOW.

   a. Full-time . . . . . _____%
   b. Part-time . . . . . _____%
   c. Temporary or contract workers . . . . . _____%

   Total: 100 %

4. Of your total workforce, approximately what percentage are:

   a. **Managers/Supervisors** . . . . _____%
   b. **Professional/Technical**. . . . . _____%
   c. **Production workers** . . . . . _____%
   d. **Office/Clerical/Sales** . . . . . _____%
   e. Service workers? . . . . . _____%

   Total: 100 %

5. **Approximately**, what percentage of your currently employed workers have been with the firm/organization for *less than one year*?

   PERCENTAGE [ ] %

6. **Would you say** your firm/organization is currently operating at capacity, near capacity or below capacity? PLEASE CIRCLE ONLY ONE.

   1 . . . . . at capacity
   2 . . . . . near capacity
   3 . . . . . below capacity

7. Finally, we would like to know if your firm/organization uses various work-place practices that some employers are currently using. Please indicate whether your firm/organization is using each of the practices listed below. PLEASE CIRCLE ONLY ONE NUMBER IN EACH ROW.

	7. Does your firm/organization . . .?		
	Yes	No	Don't Know
a. organize employees into self-managed work teams? . .	1	0	8
b. train employees to do a number of different jobs (cross training)?	1	0	8
c. have a formal job-sharing or flextime program?	1	0	8
d. regularly rotate employees among different jobs (job rotation)?	1	0	8
e. link employee compensation to performance?	1	0	8
f. organize regularly scheduled meetings with managers/supervisors and workers to discuss ways to improve workplace practices?	1	0	8
g. have a formal Total Quality Management or Continuous Quality Improvement Program?	1	0	8
h. compare its practices and performance with other firms'/organizations' practices and performance (benchmarking)?	1	0	8

Please indicate on the lines below the name of a person at your firm/organization we may contact if we have any questions about your survey:

Contact Person _____

Title _____

Telephone Number _____
Area code Telephone number

Fax Number _____
Area code Telephone number

YOUR COMMENTS?

Please use the space provided below for your comments about the survey. Feel free to make suggestions about topics or issues important to you that we may not have covered. And let us know about any problems you encountered in the survey, such as unclear instructions or questions that were difficult to understand.

THANK YOU FOR YOUR TIME AND EFFORT IN PARTICIPATING IN THIS SURVEY. PLEASE RETURN THE COMPLETED SURVEY IN THE POSTAGE PAID ENVELOPE TO:

AFFIX LABEL
HERE

Job Training Partnership Act (JTPA) Participant Survey

A Survey for
Washington State's Workforce Training and Education
Coordinating Board

Battelle
Putting Technology To Work

SECTION A: JTPA TRAINING PROGRAM PARTICIPANTS

RESPONDENT ID:	
DATE OF INTERVIEW:	
INTERVIEWER ID:	

PLEASE ENTER INTERVIEW BEGINNING TIME:

[ ][ ] : [ ][ ] AM PM

May I speak to [RESPONDENT'S FULL NAME]?

Hello Mr./Ms. [LAST NAME], my name is [INTERVIEWER'S FULL NAME] and I am calling from Battelle Survey Research Associates. We are conducting a brief telephone survey of people who were **enrolled in employment and training programs during 1993 and 1994.** This research is being conducted for the Washington State Workforce Training and Education Coordinating Board as part of an evaluation of the State's employment and training system.

Findings from this study will be used to provide information to the Washington State Legislature about the training needs of state residents. I would like to begin.

You have been randomly selected to participate in this study. Your participation is strictly voluntary and you are free to refrain from answering any or all questions at any point during the interview. The interview takes about 20 minutes to complete and includes questions about your experiences in training and education programs.

The confidentiality of your answers is guaranteed by the Privacy Act of 1974. Under this law, your answers cannot be released in any manner which would enable someone to identify you, unless you give written consent. Data from this survey will only be reported in statistical summaries and no individual responses will be identified.

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1. Our records indicate that you participated in a JTPA training program beginning in [READ BEGIN DATE FROM FACE SHEET]. Is that correct?

YES . . . . . 01 → PLEASE SKIP TO QUESTION 4.

NO 02

DON'T KNOW 09

INTERVIEWER: IF RESPONDENT DOES NOT RECALL THE TRAINING THEY RECEIVED, PROBE WITH:

2. The type of training was [READ THE TYPE OF TRAINING FROM FACE SHEET]. It ended about [READ PROGRAM END DATE FROM FACE SHEET]. Is that correct?

YES . . . . . 01 → PLEASE SKIP TO QUESTION 4.

NO 02

DON'T KNOW 09

INTERVIEWER: IF THE RESPONDENT STILL DOES NOT RECALL THE TRAINING THEY RECEIVED, THEN PROBE WITH:

3. Do you remember attending any training at all during this period, that is around (DATE BEGAN)? It may have included on-the-job training, job search assistance, basic skills training, work experience, or any other classroom training?

YES 01

NO . . . . . 02 → PLEASE SKIP TO PAGE B1, SECTION B

DON'T KNOW . . . . . 09 → PLEASE SKIP TO PAGE B1, SECTION B

4. What was the one **main** reason that you took this training? [IF R GIVES MORE THAN ONE REASON PROBE: Of the reasons you just mentioned which one was the single most important reason you took this training?]

CIRCLE ONLY ONE

TO GET A JOB 01

WANTED JOB SEARCH ASSISTANCE 02

SKILL TRAINING FOR A CERTAIN KIND OF JOB 03

ON-THE-JOB TRAINING 04

TO GET A GED 05

TO IMPROVE MY READING AND MATH 06

TO IMPROVE MY ABILITY IN ENGLISH 07

OTHER, SPECIFY: _____ 08

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5. Now I am going to read a list of skills for which people may receive training. Please tell me if you received training in any of these skills while you were attending the JTPA training program.

5.1 Did you receive any training in [READ SKILL] from the JTPA training program?

IF NO OR DK ASK 5.1 FOR NEXT SKILL ON THE LIST.
IF YES, ASK Q 5.2 ABOUT THE SKILL YOU JUST READ.

5.2. Based on the training you received from this JTPA training program did your [READ SKILL] improve significantly, somewhat, or not at all? [CIRCLE ONE AND NOW ASK 5.1 FOR NEXT SKILL.]

	5.1 Did you receive training in . . . ?			5.2 Did your (SKILL) improve significantly, somewhat or not at all?		
	YES	NO	DK	Significantly	Somewhat	Not at all
a. computer skills	1	2	9	1	2	3
b. skills to operate a particular kind of machinery or equipment	1	2	9	1	2	3
c. skills to do a specific job or occupation . . .	1	2	9	1	2	3
d. reading or writing skills	1	2	9	1	2	3
e. math skills	1	2	9	1	2	3
f. communication skills	1	2	9	1	2	3
g. critical thinking or problem solving skills .	1	2	9	1	2	3
h. team work skills	1	2	9	1	2	3
i. work habits	1	2	9	1	2	3
j. English speaking skills	1	2	9	1	2	3

6. Are there any job skills that you would still like to improve through a training or education program?

YES 01

NO . . . . . 02 **SKIP TO PAGE A6, QUESTION 9.**

DON'T KNOW . . . . . 09 **SKIP TO PAGE A6, QUESTION 9.**

7. Which job skills would you **most** like to improve? [CIRCLE ALL THAT APPLY.]

		7. ALL	8. MOST IMPORTANT
a.	COMPUTER SKILLS	01	01
b.	SKILLS TO OPERATE A PARTICULAR KIND OF MACHINERY OR EQUIPMENT	01	02
c.	SKILLS TO DO A SPECIFIC JOB OR OCCUPATION	01	03
d.	READING OR WRITING SKILLS	01	04
e.	MATH SKILLS	01	05
f.	COMMUNICATION SKILLS	01	06
g.	CRITICAL THINKING/PROBLEM SOLVING SKILLS	01	07
h.	TEAM WORK SKILLS	01	08
i.	WORK HABITS	01	09
j.	ENGLISH SPEAKING SKILLS	01	10
k.	LEADERSHIP OR MANAGEMENT SKILLS	01	11
l.	QUALITY CONTROL OR CONTINUOUS IMPROVEMENT	01	12
k.	OTHER, SPECIFY: _____	01	13

INTERVIEWER CHECK: IF R LISTED MORE THAN ONE SKILL IN Q. 7 ASK Q. 8 OTHERWISE SKIP TO Q. 9

8. Of the skills you just mentioned, that is, (READ SKILLS) which one skill would you most like to improve? [CIRCLE ONLY ONE IN COLUMN 8 ABOVE.]

9. Now I am going to read a list of characteristics about JTPA training programs. Please tell me how satisfied or dissatisfied you were with each characteristic of the JTPA training you received. If a characteristic does not apply to your training experience, please tell me. The first characteristic was the advice you received in selecting the training program.

CIRCLE ONLY ONE IN EACH ROW

	Very Satisfied	Satisfied	Dissatisfied	Does Not Apply
	1	2	3	4
a. How satisfied were you with the advice you received in selecting the training program?	1	2	3	4
b. How satisfied were you with the variety of topics covered in the training program?	1	2	3	4
c. How satisfied were you with the quality of the equipment, facilities, and buildings where the training was held?	1	2	3	4
d. How satisfied were you with the degree to which the training provided you with practical skills that employers want?	1	2	3	4
e. How satisfied were you with the length of the training program?	1	2	3	4
f. How satisfied were you with the quality of teaching ?	1	2	3	4
g. How satisfied were you with the overall quality of the training program?	1	2	3	4

10. Now I want to know about any other assistance you might have received through JTPA. I am going to read a list of types of assistance that you might have needed from the training program you attended. For each one, please tell me whether you needed this assistance.

10.1 Did you need [READ TYPE OF ASSISTANCE]?

IF NO, ASK Q 10.1 FOR NEXT TYPE OF ASSISTANCE.
IF YES, ASK Q 10.2

10.2 Did you receive [READ TYPE OF ASSISTANCE]?

IF NO, ASK Q 10.1 FOR NEXT TYPE OF ASSISTANCE.
IF YES, ASK Q 10.3

10.3 Did the [READ TYPE OF ASSISTANCE] meet your needs? **CIRCLE "1" FOR YES OR "2" FOR NO.**

	10.1 Did you need. . . ?		10.2 Did you receive . . . .?		10.3. Did the . . . meet your needs?	
	YES	**NO**	**YES**	**NO**	**YES**	**NO**
a. career or job counseling assistance? . . .	1	2	1	2	1	2
b. resume writing and assistance with job interviewing techniques?	1	2	1	2	1	2
c. job placement assistance?	1	2	1	2	1	2
d. child care assistance?	1	2	1	2	1	2
e. transportation assistance?	1	2	1	2	1	2
f. financial assistance?	1	2	1	2	1	2
g. assistance in locating information about other government programs?	1	2	1	2	1	2
h. access to facilities for the disabled or handicapped?	1	2	1	2	1	2

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11. Was there any other assistance that you needed from your JTPA training program **but did not receive**?

YES 01

NO . . . . . 02 **SKIP TO QUESTION 13.**

12. What were the other types of assistance you needed from JTPA that you did not receive? RECORD ANSWERS BELOW.

_____

_____

_____

13. Thinking about all of the reasons you had for attending this program, would you say that you **definitely** met your objectives in this training program, that you **partially** met your objectives, or that you **did not** meet your objectives at all?

CIRCLE ONLY ONE.

DEFINITELY MET OBJECTIVES . . . . . 01 **SKIP TO QUESTION 15.**

PARTIALLY MET OBJECTIVES 02

DID NOT MEET OBJECTIVES 03

14. **In what** way did the program not meet (all of) your objectives? RECORD ANSWERS BELOW. **PROBE**: Was there any other way the program did not meet your objectives?

_____

_____

_____

_____

15. Did you complete the JTPA training program?

YES . . . . . 01 **SKIP TO QUESTION 18.**

NO 02

16. Why did you leave without completing the program? [CIRCLE ALL THAT APPLY IN COLUMN 16.] [PROBE: Was there any other reason you left without completing the program?]

		16. ALL	17. ONE MAIN
a.	GOT A JOB	01	01
b.	PROGRAM DIDN'T FIT MY NEEDS	01	02
c.	DIDN'T LIKE THE INSTRUCTOR	01	03
d.	DIDN'T LIKE THE PEOPLE TRAINING WITH ME	01	04
e.	ENTERED A DIFFERENT PROGRAM	01	05
f.	WENT BACK TO SCHOOL	01	06
g.	CHILD CARE PROBLEMS OR BECAME PREGNANT	01	07
h.	MARITAL STATUS OR FAMILY SITUATION CHANGED	01	08
i.	EMPLOYMENT SITUATION CHANGED	01	09
j.	TRANSPORTATION PROBLEM	01	10
k.	MOVED	01	11
l.	EXPELLED OR ASKED TO LEAVE	01	12
m.	OTHER, SPECIFY: _____	01	13

INTERVIEWER CHECK: ASK Q. 17 ONLY IF MORE THAN ONE ANSWER TO Q. 16

17. Of the reasons you mentioned (that is, REASONS) which was the **one** most important reason you left without completing the program? [CIRCLE ONLY ONE IN COLUMN 17 ABOVE.]

MOST RECENT JOB HELD BEFORE TAKING TRAINING PROGRAM

These next questions are about your employment situation at the time you entered the JTPA program.

18. Were you employed **at the time** you entered the JTPA program, that is, around (READ PROGRAM START DATE FROM FACE SHEET)?

YES . . . . . 01 **SKIP TO QUESTION 20.**

NO 02

DON'T RECALL 09

19. **Before entering the JTPA program**, were you ever employed?

YES 01

NO . . . . . 02 **SKIP TO PAGE B1, SECTION B.**

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20. (Thinking about the job you held when you entered JTPA training/Thinking about the last job you held before entering JTPA training), where did you work? What was the name of your employer? [RECORD EMPLOYER NAME.]

_____

_____

INTERVIEWER CHECK: IF R HELD MORE THAN ONE JOB AT THE SAME TIME PROBE FOR MAIN JOB: From which of those jobs, did you earn the most money per month? **ASK REMAINING QUESTIONS IN THIS SECTION ABOUT THAT JOB.**

21. In what month and year did you start working at that job? [ENTER MO AND YEAR.]

Month Year

INTERVIEWER CHECK: IF QUESTION 18 IS "NO" OR "DK" SKIP TO QUESTION 24.

22. **Are you still** employed by that employer?

YES 01

NO . . . . . 02 **SKIP TO QUESTION 24.**

23. **Since (PROGRAM** BEGIN DATE FROM FACE SHEET) have you worked **continuously** for this employer, **or was there** a period between (PROGRAM BEGIN DATE) and now when you did not work for this **employer?**

YES - WORKED CONTINUOUSLY . . . . . 01 **SKIP TO QUESTION 26.**

NO - WAS A PERIOD WHEN DID NOT WORK FOR THIS EMPLOYER 02

24. **In what month** and year did you stop working at that job? [ENTER MO AND YEAR.]

Month Year

25. What was the **main** reason you left that job? **IF R GIVES MORE THAN ONE REASON, PROBE**: Which of those reasons would you say was the single most important reason you left this job?

CIRCLE ONLY ONE

LAID OFF 01

QUIT (UNSATISFACTORY WORK, HOURS, PAY, ETC.) 02

GOT A BETTER JOB/PROMOTED 03

TEMPORARY JOB ENDED 04

FIRED OR TERMINATED FROM JOB 05

FAMILY-RELATED REASON (E.G., PREGNANCY, MARRIAGE, ETC.) 06

HEATH-RELATED REASON (E.G., RESPONDENT ILLNESS OR INJURY) 07

SCHOOL-RELATED REASON (E.G., RESPONDENT GRADUATED, STARTED SCHOOL) 08

MOVED 09

OTHER, SPECIFY: _____ 10

26. Now I have a just a few more questions about that job. What kind of company is (NAME OF EMPLOYER)? RECORD TYPE OF BUSINESS OR INDUSTRY. IF NOT CLEAR PROBE SPECIFICALLY WHAT EMPLOYER DOES OR MAKES. What do they make or do?

_____

SIC CODE: | | |

INTERVIEWER CHECK: IF R IS STILL WORKING FOR THIS EMPLOYER USE PHRASE 'AT THE TIME YOU BEGAN JTPA TRAINING' WHEN READING THE NEXT QUESTION.

27. What was your job title at [EMPLOYER](at the time you began JTPA training)? [RECORD JOB TITLE. IF NOT CLEAR FROM TITLE WHAT RESPONDENT DOES, PROBE: What (are/were) your main duties and responsibilities on that job?]

_____

DOT CODE: | | | |

INTERVIEWER CHECK:

IF RESPONDENT STILL HAS THIS JOB: USE THE PHRASE "Thinking back to the period around when you entered JTPA" AS YOU READ THE NEXT THREE QUESTIONS.

28. (Thinking back to the period around when you entered the JTPA program)About how many hours per week did you **usually** work on that job?

NUMBER OF HRS WORK PER WEEK: | | |

29. (Again, thinking back to the period around when you entered JTPA)What were your earnings **before taxes** (including salary, bonuses, commisssions and tips) on that job? WRITE IN THE DOLLAR AMOUNT AND INDICATE IF THE FIGURE YOU ENTERED IS AN HOURLY, WEEKLY, TWICE-MONTHLY, MONTHLY OR YEARLY AMOUNT.

$ | , .

IF NOT CLEAR WHAT RATE IS ASK: Is that per hour, per week, per month or what?

CIRCLE ONLY ONE

HOURLY 01

WEEKLY 02

BI-WEEKLY OR TWICE A MONTH 03

MONTHLY 04

YEARLY 05

30. (Thinking again about when you entered the JTPA program,)/Did you receive any of the following benefits from that job? Did you receive . . . [READ EACH.]?

	YES	NO
a. health insurance benefits?	01	02
b. pension benefits?	01	02

INTERVIEWER CHECK: IF Q. 22 IS "YES" (R STILL WITH SAME EMPLOYER), ASK Q. 31, OTHERWISE SKIP TO PAGE B1, SECTION B.

31. A moment ago you told me you were still working for (EMPLOYER). Is this your only job? [IF MORE THAN ONE JOB PROBE: Do you earn the most money per month from this job or do you earn more money per month from your other job?]

YES, THIS IS ONLY JOB 01

HAD TWO JOBS BUT THIS ONE WAS HIGHEST PAY 02

NO, HAVE ANOTHER HIGHER PAY JOB 03

SKIP TO PAGE B1, QUESTION 3 AND ASK SECTION B FOR HIGHER PAY JOB.

INTERVIEWER CHECK: ASK Q 32 ONLY IF R ANSWERED Q 23 " NO", OTHERWISE SKIP TO Q 33.

32. In what month and year did you start working again for this employer? [ENTER MO AND YEAR.]

Month Year

33. What is your job title now? [RECORD JOB TITLE.] PROBE IF NOT CLEAR FROM TITLE WHAT RESPONDENT DOES: What are your main duties and responsibilities on that job?

_____

_____

DOT CODE: | | | |

34. Now thinking about the present time, about how many hours per week do you currently **usually** work on your job at (EMPLOYER)?

NUMBER OF HRS WORK PER WEEK: | | |

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35. And what are your current earnings **before taxes** (including salary, bonuses, commissions and tips) on that job? WRITE IN THE DOLLAR AMOUNT AND INDICATE IF THE FIGURE YOU ENTERED IS AN HOURLY, WEEKLY, TWICE-MONTHLY, MONTHLY OR YEARLY AMOUNT.

$ | , .

CIRCLE ONLY ONE

IF NOT CLEAR WHAT RATE IS ASK: Is that per hour, per week, per month or what?

HOURLY 01

WEEKLY 02

BI-WEEKLY OR
TWICE A MONTH 03

MONTHLY 04

YEARLY 05

NOW SKIP TO PAGE B3 - SECTION B, QUESTION 9.

SECTION B: CURRENT/MOST RECENT JOB

Now I would like to ask you some questions about your current or your most recent job.

1. Are you **currently** employed?

YES . . . . . 01 → **SKIP TO QUESTION 3.**

NO 02

INTERVIEWER CHECK: DATE FOR NEXT QUESTION

NON-PARTICIPANTS - USE DATE REG WITH EMPLOYMENT SERVICE FROM FACE SHEET
JTPA - USE PROGRAM END DATE FROM FACE SHEET
CC OR ABE - USE DATE LEFT PROGRAM FROM PAGE A8, Q. 15a.

2. Have you been employed since (DATE)? Please include any job you have held since then, even if it only lasted for a short time.

YES 01

NO . . . . . 02 → **SKIP TO PAGE B6, QUESTION 21.**

3 What is the name of your current employer?/What was the name of your most recent employer?

_____

_____

INTERVIEWER CHECK: IF RESPONDENT HAS 2 CURRENT JOBS OR HAD 2 PREVIOUS JOBS THAT ENDED ON THE SAME DAY, PROBE FOR MAIN JOB: From which of those jobs (do/did) you earn the most money per month? **ASK REMAINING QUESTIONS IN THIS SECTION ABOUT THE JOB ON WHICH EARNED MOST MONEY.**

4 In what month and year did you start (this/that) job? [ENTER MO AND YEAR.]

Month Year

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5. **What kind of company is (NAME OF EMPLOYER)? RECORD TYPE OF BUSINESS OR INDUSTRY. IF NOT CLEAR PROBE SPECIFICALLY FOR WHAT EMPLOYER DOES OR MAKES. What does (EMPLOYER) make or do?**

_____

_____

SIC CODE: | | |

6. What was your job title at (EMPLOYER)? RECORD JOB TITLE. IF NOT CLEAR FROM TITLE WHAT RESPONDENT DOES, PROBE: What (are/were) your main duties and responsibilities on that job?

_____

_____

DOT CODE: | | | |

7. How many hours per week (do/did) you **usually** work on that job?

NUMBER OF HRS WORK PER WEEK: | | |

8. **What (are/were) your earnings before taxes (including salary, bonuses, commissions and tips) on that job?** WRITE IN THE DOLLAR AMOUNT AND INDICATE IF THE FIGURE YOU ENTERED IS AN HOURLY, WEEKLY, TWICE-MONTHLY, MONTHLY OR YEARLY AMOUNT.

$				,				.		

IF RATE IS NOT CLEAR ASK: Is that per hour, per week, per month, or what?

CIRCLE ONLY ONE

HOURLY 01

WEEKLY 02

BI-WEEKLY OR
TWICE A MONTH 03

MONTHLY 04

YEARLY 05

9. Do/Did you receive any of the following benefits from that job? Do/Did you receive . . . [READ EACH.]?

		YES	NO
a.	health insurance benefits?	01	02
b.	pension benefits?	01	02

INTERVIEWER CHECK: IF Q1 ON PAGE B1 IS "YES" (CURRENTLY WORKING), SKIP TO PAGE B4, QUESTION 12.

10. In what month and year did you stop working at this job? [ENTER MO AND YEAR.]

Month Year

11. What was the **main** reason you left that job? **IF R GIVES MORE THAN ONE REASON, PROBE**: Which of those reasons would you say was the single most important reason you left this job?

CIRCLE ONLY ONE

LAID OFF	01
QUIT (UNSATISFACTORY WORK, HOURS, PAY, ETC.)	02
GOT A BETTER JOB	03
TEMPORARY JOB ENDED	04
FIRED OR TERMINATED FROM JOB	05
FAMILY-RELATED REASON (E.G., PREGNANCY, MARRIAGE, ETC.)	06
HEATH-RELATED REASON (E.G., RESPONDENT ILLNESS OR INJURY)	07
SCHOOL-RELATED REASON (E.G., RESPONDENT GRADUATED, STARTED SCHOOL)	08
MOVED	09
OTHER, SPECIFY: _____	10

NOW SKIP TO INTERVIEWER CHECK BOX BEFORE QUESTION 13.

12. ASK THIS QUESTION ONLY IF R CURRENTLY HOLDS THIS JOB: How satisfied are you with this job? Would you say you are very satisfied, somewhat satisfied, satisfied, somewhat dissatisfied or very dissatisfied?

CIRCLE ONLY ONE

VERY SATISFIED 01

SOMEWHAT SATISFIED 02

SATISFIED 03

SOMEWHAT DISSATISFIED 04

VERY DISSATISFIED 05

INTERVIEWER CHECK : IF R IS A NON-PARTICIPANT OR DID NOT RECALL PARTICIPATING IN A TRAINING OR COLLEGE PROGRAM (I.E., ANSWERED "NO" TO Q. 1-3 IN SECTION A), SKIP TO PAGE B5, QUESTION 16.

13. On (this/that) job, (do/did) you **use any of the skills you obtained** from the training you received from [READ PROGRAM OR SCHOOL FROM THE FACE SHEET]?

YES 01

NO 02

DON'T KNOW 09

14. **What one** skill that you learned or improved in the [READ PROGRAM OR SCHOOL FROM THE FACE SHEET] (is/was) most useful on your (current/most recent) job?

_____

SKILL CODE:		

15. (Is/Was) that skill very useful, somewhat useful, or only slightly useful in performing the duties of (this/that) job? [CIRCLE ONLY ONE.]

VERY USEFUL 01

SOMEWHAT USEFUL 02

ONLY SLIGHTLY USEFUL 03

16. Now I want to ask you about any training you may have received from your employer. First, have you taken any classes or workshops at your place of work that lasted four (4)or more hours?

YES 01

NO 02

DON'T KNOW 09

17. Have you received any on-the-job training from your employer that lasted four (4) or more hours.

YES 01

NO 02

DON'T KNOW 09

18. Have you taken any classes or workshops at a school or college that your employer paid for that lasted four (4) or more hours.

YES 01

NO 02

DON'T KNOW 09

INTERVIEWER CHECK: IF R ANSWERED QUESTIONS 16, 17 AND 18 ALL "NO" OR "DK" THEN SKIP TO INTERVIEWER CHECK BOX BEFORE Q 20. OTHERWISE ASK Q. 19.

19 Thinking of all the types of training provided by your employer, how worthwhile was this training in its effect on your ability to do your job? Was this training very worthwhile, somewhat worthwhile, or not at all worthwhile?

CIRCLE ONLY ONE

VERY WORTHWHILE 01

SOMEWHAT WORTHWHILE 02

NOT AT ALL WORTHWHILE 03

INTERVIEWER CHECK: IF RESPONDENT IS IN JPTA, COMMUNITY COLLEGE OR ADULT BASIC EDUCATION SAMPLE SKIP TO PAGE C1 - SECTION C

20. Are there any skills you would (still) like to improve either through your employer or through an educational institution or training program?

YES 01

NO . . . . . 02 → **SKIP TO PAGE C1, SECTION C.**

21. Which job skills would you **most** like to improve? [CIRCLE ALL THAT APPLY.]

		20. ALL	21. MOST IMPORTANT
a.	COMPUTER SKILLS	01	01
b.	SKILLS TO OPERATE A PARTICULAR KIND OF MACHINERY OR EQUIPMENT	01	02
c.	SKILLS TO DO A SPECIFIC JOB OR OCCUPATION	01	03
d.	READING OR WRITING SKILLS	01	04
e.	MATH SKILLS	01	05
f.	COMMUNICATION SKILLS	01	06
g.	CRITICAL THINKING/PROBLEM SOLVING SKILLS	01	07
h.	TEAM WORK SKILLS	01	08
i.	WORK HABITS	01	09
j.	ENGLISH SPEAKING SKILLS	01	10
k.	LEADERSHIP OR MANAGEMENT SKILLS	01	11
l.	QUALITY CONTROL OR CONTINUOUS IMPROVEMENT	01	12
m.	OTHER, SPECIFY: _____	01	13

INTERVIEWER CHECK: IF R LISTED MORE THAN ONE SKILL IN Q. 20 ASK Q. 21 OTHERWISE SKIP TO PAGE C1, SECTION C.

22. Of the skills you just mentioned, that is, (READ SKILLS) which one skill would you most like to improve? [CIRCLE ONLY ONE IN COLUMN 20 ABOVE.]

INTERVIEWER: NOW SKIP TO PAGE C1, SECTION C.

23. Are you currently looking for a job?

YES . . . . . 01 → **SKIP TO QUESTION 25.**

NO 02

24. What is the **one** main reason you are not currently looking for work?

CIRCLE ONLY ONE

DISCOURAGED: No/Few jobs available in line of work or area 01

COULDN'T FIND ANY WORK 02

LACKS NECESSARY SKILLS, EXPERIENCE, TRAINING, OR SCHOOLING 03

EMPLOYERS THINK TOO YOUNG OR TOO OLD 04

OTHER TYPES OF DISCRIMINATION 05

CAN'T ARRANGE CHILD CARE 06

POOR HEALTH/INJURY/ACCIDENT/DISABILITY 07

FAMILY RESPONSIBILITIES 08

IN SCHOOL/TRAINING PROGRAM 09

TRANSPORTATION PROBLEMS 10

OTHER, SPECIFY: _____ 11

INTERVIEWER: NOW SKIP TO PAGE C1, SECTION C

25. In the last six months, have you done any of the following to look for work? Have you . . .[READ EACH.]

	YES	NO	DON'T KNOW
a. contacted employers in person?	1	2	9
b. contacted a public employment agency?	1	2	9
c. contacted a private employment agency?	1	2	9
d. sent out resumes or filled out applications?	1	2	9
e. contacted friends or relatives about potential jobs?	1	2	9
f. placed or answered ads?	1	2	9
g. checked union or professional registers	1	2	9

26. I'm going to read a list of reasons why people may be unable to find a job. Please tell me if each of these reasons is true or false for your own situation. READ EACH STATEMENT AND CIRCLE ONE ANSWER.

	TRUE	FALSE	Don't Know
a. The jobs I could get do not pay enough	1	2	9
b. There are few jobs available in my line of work or my geographic area	1	2	9
c. I cannot work the hours of the jobs that are available	1	2	9
d. I do not have the necessary work skills for the jobs that are available	1	2	9
d. Health problems make it difficult for me to work	1	2	9
e. Child care problems make it difficult for me to work	1	2	9
f. Transportation problems make it difficult for me to work	1	2	9

INTERVIEWER CHECK:

IF R IS IN JPTA, COMMUNITY COLLEGE OR ABE SAMPLE SKIP TO Q 16 ON PAGE C4

IF R IS NON-PARTICIPANT ASK Q. 1

SECTION C
PARTICIPATION IN OTHER PROGRAMS

Now I have a few questions about education and training opportunities you may have considered.

1. Do you know if you are you eligible for training through any government programs like JTPA, EDWAA ("Edwah"), JOBS, or the Trade Adjustment Assistance program?

YES 01

NO . . . . . 02 → **SKIP TO PAGE C3, QUESTION 10.**

DON'T KNOW . . . . . 09 → **SKIP TO PAGE C3, QUESTION 10.**

2. Which of these programs are you eligible for? [IF RESPONDENT DOES NOT KNOW WHICH PROGRAMS ELIGIBLE FOR CIRCLE ONLY 09]

CIRCLE ALL THAT APPLY

a JTPA 01

b EDWAA 01

c JOBS 01

d TRADE ADJUSTMENT ASSISTANCE PROGRAM 01

e OTHER, SPECIFY: _____ 01

DON'T KNOW WHICH ELIGIBLE FOR 09

3. Have you applied for training under one of these programs since July 1993?

YES 01

NO . . . . . 02 → **SKIP TO PAGE C3, QUESTION 9.**

DON'T RECALL . . . . . 09 → **SKIP TO PAGE C3, QUESTION 10.**

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4. Did you actually participate in one of these training or education programs at any time since July 1993?

YES . . . . . 01 → **SKIP TO QUESTION 6.**

NO 02

DON'T RECALL . . . . . 09 → **SKIP TO QUESTION 10.**

5. Why did you not participate in the program for which you applied?

CIRCLE ALL THAT APPLY

a. GOT A JOB 01

b. PROGRAM DID NOT OFFER TRAINING I NEEDED 01

c. ENROLLED IN DIFFERENT PROGRAM 01

d. TOO BUSY/CHANGED MIND/DID NOT GET AROUND TO IT 01

e. FAMILY PROBLEMS 01

f. TRANSPORTATION PROBLEMS 01

g. OTHER, SPECIFY: _____ 01

INTERVIEWER: NOW SKIP TO QUESTION 10.

6. In what month and year did you start training in the program?

Month Year

7. Are you still in the program?

YES . . . . . 01 → **SKIP TO QUESTION 10.**

NO 02

8. In what month and year did you leave the program? [ENTER MO AND YEAR.]

Month Year

9. What was the **one main** reason you did not apply?

CIRCLE ONLY ONE

DIDN'T KNOW HOW TO APPLY 01

GOT A JOB 02

TOO BUSY/DIDN'T HAVE TIME 03

WASN'T INTERESTED IN PROGRAM 04

CHILD CARE PROBLEMS 05

TRANSPORTATION PROBLEMS 06

DIDN'T THINK IT WOULD HELP ME GET A JOB 07

COST TOO MUCH 08

OTHER, SPECIFY:_____ . . . 09

10. Is there a community college or technical college in your area?

YES 01

NO . . . . . 02 → **SKIP TO PAGE C4, QUESTION 16.**

DON'T KNOW . . . . . 09 → **SKIP TO PAGE C4, QUESTION 16.**

11. Do you know if you would be eligible for financial aid at a community or technical college?

YES 01

NO 02

DON'T KNOW 09

12. Have you taken any classes at a community or technical college at any time since July 1993?

YES 01

NO . . . . . 02 → **SKIP TO PAGE C4, QUESTION 14.**

DON'T RECALL . . . . . 09 → **SKIP TO PAGE C4, QUESTION 14.**

13. What kind of classes were they?

_____

_____

INTERVIEWER: NOW SKIP TO QUESTION 16.

14. Since July 1993, have you **considered** taking any classes at a community or technical college?

YES 01

NO . . . . . 02 → **SKIP TO QUESTION 16.**

DON'T RECALL . . . . . 09 → **SKIP TO QUESTION 16.**

15. Why did you decide not to take classes at a community college?

CIRCLE ALL THAT APPLY

a TOO BUSY/DIDN'T HAVE TIME 01

b WORKING 01

c. **DIDN'T** THINK IT WAS WORTH IT 01

d **CHILDCARE** PROBLEMS 01

e TRANSPORTATION PROBLEMS 01

f **DIDN'T** OFFER PROGRAM I WANTED 01

g CLASSES OFFERED AT INCONVENIENT TIMES 01

h COST TOO MUCH 01

i OTHER, SPECIFY: _____ . . 01

16. Other than the training programs I have already mentioned, have you attended classes or taken a training program at any type of school or college since July 1993?

YES 01

NO . . . . . 02 → **SKIP TO QUESTION 19.**

DON'T RECALL . . . . . 09 → **SKIP TO QUESTION 19.**

17. What type of school, college, or program was it?

_____

_____

SCHOOL CODE:		

18. What type of training did you receive?

_____

_____

TRAINING CODE:		

19. Now I would like to ask your opinion about the mix of classroom or workshop training and on-the-job training you have received. Considering all of your training, either through an employer, training program, or educational institution, would you say you had too much classroom training and not enough on-the-job training, too much on-the-job training and not enough classroom training, or just the right mix between classroom and on-the-job training?

CIRCLE ONLY ONE

TOO MUCH CLASSROOM, NOT ENOUGH ON THE JOB	01
TOO MUCH ON-THE-JOB TRAINING, NOT ENOUGH CLASSROOM	02
JUST THE RIGHT MIX OF CLASSROOM AND ON-THE-JOB	03
NOT ENOUGH OF EITHER CLASSROOM TRAINING OR ON-THE-JOB	04
DON'T KNOW	09

SECTION D: BACKGROUND QUESTIONS

Finally, I have just a few questions about your background.

1. What was your age on your last birthday? [ENTER AGE.]

2. What is your current marital status? Are you **currently** married, living with a partner, divorced, **separated**, widowed, or have you never been married?

CIRCLE ONLY ONE

MARRIED	01	
LIVING WITH A PARTNER	02	
DIVORCED	03	→ **SKIP TO QUESTION 4**
SEPARATED	04	→ **SKIP TO QUESTION 4**
WIDOWED	05	→ **SKIP TO QUESTION 4**
NEVER MARRIED	06	→ **SKIP TO QUESTION 4**

3. Is your (spouse/partner) **currently** working for pay?

YES	01
NO	02

4. **Including yourself**, how many people are **currently** living in your household? [ENTER NUMBER.]

5. How many years of schooling have you **completed**? [ENTER THE NUMBER OF YEARS.]

INTERVIEWER CHECK: IF ANSWER TO Q 5 IS LESS THAN 9 YEARS, SKIP TO QUESTION 7.

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6. What type of program did you take when you were in high school? Was it a general studies program, a vocational program, or a college preparatory program?

CIRCLE ONLY ONE

GENERAL STUDIES 01

VOCATIONAL 02

COLLEGE PREPARATORY 03

DON'T KNOW 09

7. What is the highest degree or certificate you earned in school?

CIRCLE ONLY ONE

NONE 01

GED CERTIFICATE 02

HIGH SCHOOL DIPLOMA 03

ONE YEAR VOCATIONAL CERTIFICATE, DIPLOMA 04

TWO YEAR ASSOCIATE OF ARTS DEGREE (ACADEMIC) 05

TWO YEAR ASSOCIATE OF ARTS DEGREE
(VOCATIONAL OR OCCUPATIONAL DEGREE) 06

FOUR YEAR DEGREE/BACHELOR'S DEGREE 07

MASTERS, DOCTORAL, OR PROFESSIONAL DEGREE 08

OTHER, SPECIFY: _____ 09

8. Are you of Spanish or Hispanic origin?

YES 01

NO 02

9. I am going to read a list of race categories. What is your race? Are you white, black, American Indian, Aleut, Eskimo, Asian or Pacific Islander or something else? [IF RESPONDENT ANSWERS "American" PROBE WITH: What is your family origin or decent?]

CIRCLE ONLY ONE

a. WHITE 01

b. BLACK OR AFRICAN AMERICAN 02

c. AMERICAN INDIAN, ESKIMO, ALEUT 03

d. ASIAN OR PACIFIC ISLANDER 04

e. OTHER: _____ 05

10. How many years have you lived in Washington State? [ENTER NUMBER, IF LESS THAN 1 YEAR ENTER ZERO.]

11. Do you have a handicap or physical disability?

YES 01

NO 02

12. In the last 12 months, have you received any form of public assistance through such programs as Aid to Families with Dependent Children (AFDC), Food Stamps, or the Women, Infant and Children Supplementary Food Program (WIC)?

YES 01

NO 02

DON'T KNOW 09

13. In 1994, what was your household income, before taxes, including all sources? Was it between . . . [READ RANGES]?

CIRCLE ONLY ONE

$ 0 - $10,000	01
$10,000 - $15,000	02
$15,000 - $20,000	03
$20,000 - $30,000	04
$30,000 - $40,000	05
$40,000 - $50,000	06
Above $50,000	07

I have just a couple more questions about when you were growing up.

14. We are interested in knowing with whom were you living during most of the time when you were growing up, that is between the ages of 5 and 15? With what adults were you living most of that time? [READ CATEGORIES IF NECESSARY.]

CIRCLE ONLY ONE

MOTHER AND FATHER	01
MOTHER ONLY	02
MOTHER AND STEPFATHER	03
MOTHER AND OTHER ADULTS	04
FATHER ONLY	05
FATHER AND STEPMOTHER	06
FATHER AND OTHER ADULTS	07
OTHER, SPECIFY: _____	08

15. What was your father's (OR MALE GUARDIAN FROM Q. 14) main occupation during most of the time when you were growing up?

CIRCLE ONLY ONE.

ADMINISTRATIVE OR MANAGERIAL
(executives, managers, self-employed administrators) 01

PROFESSIONAL (teachers, lawyers, doctors, writers, artists, engineers,) 02

TECHNICIANS (nurses, health specialists, computer) 03

SALES OCCUPATIONS (sales representatives, clerks) 04

CLERICAL WORKERS (secretaries, clerks, receptionists) 05

SERVICE OCCUPATIONS (domestic, lodging, barbering, amusement,
protective, food and beverage preparation and service, janitorial) 06

FARMING, FISHING, FORESTRY (farmers, fishermen, loggers) 07

PRECISION, PRODUCTION, CRAFT, REPAIR
(Processing, mechanics, printing, textiles,
construction trades, manufacturing) 08

OPERATORS, FABRICATORS
(machine operators, assemblers, painters, installers,
tailors, welders,) 09

LABORERS 10

NOT APPLICABLE, DID NOT WORK FOR PAY 98

DON'T KNOW 99

16. What was your mother's (OR FEMALE GUARDIAN FROM Q 14) main occupation during most of the time when you were growing up?

CIRCLE ONLY ONE.

ADMINISTRATIVE OR MANAGERIAL
(executives, managers, self-employed administrators) 01

PROFESSIONAL (teachers, lawyers, doctors, writers, artists, engineers,) 02

TECHNICIANS (nurses, health specialists, computer) 03

SALES OCCUPATIONS (sales representatives, clerks) 04

CLERICAL WORKERS (secretaries, clerks, receptionists) 05

SERVICE OCCUPATIONS (domestic, lodging, barbering, amusement,
protective, food and beverage preparation and service, janitorial) 06

FARMING, FISHING, FORESTRY (farmers, fishermen, loggers) 07

PRECISION, PRODUCTION, CRAFT, REPAIR
(Processing, mechanics, printing, textiles,
construction trades, manufacturing) 08

OPERATORS, FABRICATORS
(machine operators, assemblers, painters, installers,
tailors, welders,) 09

LABORERS 10

NOT APPLICABLE, DID NOT WORK FOR PAY 98

DON'T KNOW 99

THAT IS THE END OF THE SURVEY. THANK YOU VERY MUCH FOR YOUR TIME AND PATIENCE IN ANSWERING THESE QUESTIONS. WE REALLY APPRECIATE IT.

PLEASE ENTER INTERVIEW ENDING TIME:

☐☐ : ☐☐ AM PM

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